

THE STATE OF RHODE ISLAND
AND PROVIDENCE PLANTATIONS

The General Assembly of Rhode Island requested an independent study on the potential costs and implications of not appropriating funds to make good on the state's moral obligation related to debt service on the 38 Studios Bonds. This report explains and summarizes our findings.

Report on Rhode Island's Moral Obligation on the 38 Studios Bonds

5/8/2014

ABOUT SJ ADVISORS LLC

SJ Advisors offers financial advisory services in connection with the issuance and ongoing active management of debt and related instruments. We help clients navigate the twists and turns of complex financial transactions, saving them time and lowering their costs, while achieving the right solution for the organization or entity.

SJ Advisors' professionals work in close partnership with clients, creating solutions to realize their financing objectives that enable organizational goals. They are proficient at educating clients on market dynamics and pricing to allow for more informed financing decisions.

We deliver value by creating options and process, helping clients make more informed decisions, saving them valuable time, and improving the bottom line by reducing the organization's cost of debt.

SJ Advisors is an independent firm, so our advice is not limited by any pre-existing relationships or constrained to a specified set of available financial products. The firm is a veteran owned small business and is registered with the SEC and MSRB.

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Steve Johnson founded SJ Advisors, LLC in 2010 after more than 20 years of professional experience in finance, management consulting, and international project management. He has served as financial advisor to clients in the higher education, healthcare, assisted living, religious orders, and municipal segments. Mr. Johnson has a broad range of experience managing transactions from fairly simple to very complex for highly rated and unrated institutions. Clients have included Bryant University, The Chicago School Education System, the Massachusetts School of Professional Psychology, Midwestern University, the University of San Francisco, Crystal Springs Inc., HealthPoint, Ministry Health Care, Bellin Health System, Parrish Medical Center, and others.

Mr. Johnson formed SJ Advisors to assist clients with all aspects of their debt portfolio, helping them understand the often complex risk/reward trade-offs of key financial decisions. He collaborates with clients to create customized financing solutions that fulfill their specific goals and objectives, on transaction, portfolio, and strategic levels. Steve establishes a clear process to achieve optimal results, taking into account his client's needs and concerns. Activities may include early stage needs analysis, debt capacity analysis, identifying sources of credit and funding, structuring debt to achieve the right balance of low rate and low risk, and reducing transaction costs. Mr. Johnson advises on tax-exempt and taxable, new money and refinancing transactions involving publicly issued bonds as well as bank purchased bonds, term debt, lines of credit, letters of credit, interest rate swaps, and related products. He guides clients

through market and portfolio considerations with respect to fixed rate, variable rate, and synthetic structures. Mr. Johnson has significant experience with derivative products and assists clients with structuring, modifying, and terminating interest rate swaps, options, and caps, including early terminations in cases where a default has occurred. He applies his market experience, knowledge of financial products, and relationships across the industry to help clients make informed decisions and provide transparency to the process and pricing.

Prior to his career as a financial advisor, Mr. Johnson served as an officer in the United States Air Force, a management consultant with Bain & Company, and a finance professional with Target Corporation. Mr. Johnson received a B.S. in electrical engineering from Rensselaer Polytechnic Institute, an M.S. in controls and systems engineering from the University of West Florida, and an MBA from the Wharton School at the University of Pennsylvania.

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Linda Port joined SJ Advisors, LLC in 2014 after nearly 25 years of practicing law. She was a shareholder at Greenberg Traurig and before that, a partner at Mintz Levin. She advised non-profits in financial transactions, including the issuance of tax-exempt and taxable bonds, bank loans, interest rate swap agreements and strategic partnerships. She also represented underwriters and served as bond counsel on both tax-exempt and taxable financings for non-profits and governmental entities. She was selected as one of “America’s Leading Lawyers in Boston” (Business & Finance: Public Finance) by Chambers USA, 2012 edition.

Prior to practicing law, Ms. Port was a fiscal research analyst in the Office of Policy Evaluation and Analysis for the Pennsylvania Department of Revenue. She analyzed administrative and legislative proposals: assessed revenue impacts, administrative feasibility and impacts on local governments, business and individuals.

She currently serves as Vice Chair of the Wheelock College Board of Trustees, and also serves on its Executive, Finance and International Committees. Ms. Port serves on the Board of Trustees of Old Colony Hospice, serving on its Finance Committee. She also has served in a variety of volunteer and appointed positions for the Town of Hingham, including Chair of the Advisory Committee, Chair of the Special Education Funding Working Group, a Member of the Government Study Committee and the Town Administrator Search Committee.

Ms. Port received her B.A. from Duke University with a double major in Economics and Public Policy, graduating *magna cum laude*, and spent a semester abroad at the London School of Economics. She got her J.D. at Boston College Law School, graduating *magna cum laude*.

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EXECUTIVE SUMMARY

In 2010, the Rhode Island Economic Development Corporation (now named the Rhode Island Commerce Corporation) ("RICC") issued \$75 million of its Job Creation Guaranty Program Taxable Revenue Bonds (38 Studios, LLC Project), Series 2010 (the "38 Studios Bonds"). 38 Studios filed for bankruptcy in 2012, leaving the state with a moral obligation (but not legal obligation) to make the remaining debt service payments. In 2013 the state legislature debated, and eventually appropriated \$2.5 million needed to avoid defaulting on the bonds in fiscal year ("FY") 2014. Now that decision is being faced again, as it will be every fiscal year through 2021, when the 38 Studios Bonds reach final maturity. The total debt service coming due FY 2015 through FY 2021 will be about \$87 million, or roughly \$12.4 million per year. See Tables 1 and 2 below, which show uses of proceeds and debt service for the 38 Studios Bonds.

This issue has been studied previously and is of heavy concern to the members of the General Assembly as it seeks to determine the best course of action for the people of Rhode Island. The purpose of this report is to provide additional insight to the legislature about the potential risks and costs of non-appropriation, so that the General Assembly can weigh those against the cost of meeting the debt service requirements.

Definitions/Types of Debt

As we lay out potential costs of not honoring the moral obligation, it is helpful to understand the types of debt obligations issued by states and other governmental entities. These are described more fully in the Background section on "Moral Obligation Bond" and "Other Types of Obligations".

General Obligation ("GO") bonds are issued directly by a governmental entity and are the only type secured by its "full faith and credit". The issuer is legally bound to pay debt service.

Moral Obligation ("MO") bonds (including the 38 Studios Bonds) are secured by a revenue stream and further supported by a non-binding covenant to appropriate funds for debt service if the revenue stream is insufficient. Often, as in this case, this is done by replenishing a debt service reserve fund.

Appropriation bonds are similar to moral obligation bonds in that the obligation to make debt service payments is subject to the money being appropriated for that purpose. While there is no universally accepted definition of moral obligation bonds versus appropriation bonds, we use the term appropriation bonds to include those bonds for which the primary source of repayment is annual appropriations by the governmental entity. A common example are certificates of participation.

Revenue bonds are generally payable from a specific stream of revenue.

As more fully shown in this report, notwithstanding the fact that the legislature's pledge is non-binding in the legal sense, the bond market sees all of these types of commitments as real, bona fide obligations of the state. If they are truly optional, why would any legislature ever honor them? A decision to walk away will be seen as reneging on the state's commitments, and therefore will affect the market's view of the state's willingness to pay all of its obligations, including general obligation bonds. We expect that the rating agency reaction will be swift and severe: – that the state's bonds will be reduced to non-investment grade (so-called "junk bonds") – and that there will be a material and adverse effect on both the interest rates that the state pays when it issues debt and the market value of outstanding Rhode Island bonds.

Table 1 – Uses of 38 Studios Bonds Proceeds

USES	AMOUNT
Project Fund	\$49,799,010.42
Capital Reserve Fund	12,749,912.50
Capitalized Interest Account	10,604,076.63
Costs of Issuance	650,000.00
PA Discount	634,065.00
Bond Insurance	562,935.45
TOTAL	\$75,000,000.00

Table 2 – 38 Studios Bonds Debt Service

Period Start	Period End	Debt Service Payment Due in Fiscal Year	Outstanding Principal	End of Period Amortization	Coupon	Interest	Total Debt Service	5/1/2014 PV of DS @ 5%
11/2/2010	5/1/2011	FY 11	\$75,000,000.00			2,639,957.88	2,639,957.88	
5/1/2011	11/1/2011	FY 12	75,000,000.00			2,654,706.25	2,654,706.25	
11/1/2011	5/1/2012		75,000,000.00			2,654,706.25	2,654,706.25	
5/1/2012	11/1/2012	FY 13	75,000,000.00			2,654,706.25	2,654,706.25	
11/1/2012	5/1/2013		75,000,000.00			2,654,706.25	2,654,706.25	
5/1/2013	11/1/2013	FY 14	75,000,000.00	7,440,000.00	6.00%	2,654,706.25	10,094,706.25	
11/1/2013	5/1/2014		67,560,000.00			2,431,506.25	2,431,506.25	
5/1/2014	11/1/2014	FY 15	67,560,000.00	7,885,000.00	6.00%	2,431,506.25	10,316,506.25	10,065,860.72
11/1/2014	5/1/2015		59,675,000.00			2,194,956.25	2,194,956.25	2,090,434.52
5/1/2015	11/1/2015	FY 16	59,675,000.00	8,360,000.00	6.00%	2,194,956.25	10,554,956.25	9,808,111.84
11/1/2015	5/1/2016		51,315,000.00			1,944,156.25	1,944,156.25	1,763,171.33
5/1/2016	11/1/2016	FY 17	51,315,000.00	8,860,000.00	6.75%	1,944,156.25	10,804,156.25	9,560,321.04
11/1/2016	5/1/2017		42,455,000.00			1,645,131.25	1,645,131.25	1,420,936.28
5/1/2017	11/1/2017	FY 18	42,455,000.00	9,455,000.00	7.75%	1,645,131.25	11,100,131.25	9,354,496.89
11/1/2017	5/1/2018		33,000,000.00			1,278,750.00	1,278,750.00	1,051,890.17
5/1/2018	11/1/2018	FY 19	33,000,000.00	10,190,000.00	7.75%	1,278,750.00	11,468,750.00	9,204,900.70
11/1/2018	5/1/2019		22,810,000.00			883,887.50	883,887.50	692,456.42
5/1/2019	11/1/2019	FY 20	22,810,000.00	10,980,000.00	7.75%	883,887.50	11,863,887.50	9,068,610.37
11/1/2019	5/1/2020		11,830,000.00			458,412.50	458,412.50	341,983.03
5/1/2020	11/1/2020	FY 21	11,830,000.00	11,830,000.00	7.75%	458,412.50	12,288,412.50	8,944,625.30
TOTALS			75,000,000.00				112,587,089.13	
Less Funds from Capitalized Interest Account (Used to pay debt service from 5/1/11 - 11/1/12)							(10,604,076.63)	
Less Funds from Capital Reserve Fund (Used to pay debt service from 5/1/13 - 11/1/13)							(12,749,412.50)	
Sub-Total Net of Proceeds Used for Debt Service							89,233,600.00	
5/1/2014 Debt Service from FY 2014 Appropriations							(2,431,506.25)	
Total Remaining Debt Service							86,802,093.75	73,367,798.61
Additional Funds Available for Debt Service							(447,648.00)	(447,648.00)
Total Amount Requiring Future Appropriation							86,354,445.75	72,920,150.61

Options and Impact

There are three basic options with respect to appropriation:

- OPTION 1. Honor the moral obligation: Appropriate funds annually until the 38 Studios Bonds are paid off. The debt service is a known quantity; this option requires no analysis or assumptions to determine the cost.
- OPTION 2. Do not honor the moral obligation: Do not appropriate funds now or in future years. This report focuses on quantifying the effects of pursuing Option 2, as compared to Option 1. Non-appropriation would be followed by a complex series of events, the all-inclusive costs of which are difficult to quantify. We describe the logical cause and effect with respect to existing and future debt, and estimate a range of costs based on our data driven analysis.
- OPTION 3. Test the waters: Do not appropriate funds now and observe the impact on the cost of future debt. The option to appropriate funds in future years is reserved. This option is not analyzed because it either becomes identical to Option 2, or a reversal is made and debt service is paid but at a much greater total cost than simply following Option 1 (because of the interim period of lower ratings and higher costs). This could also be considered the Humpty Dumpty option: once broken, it is difficult to quickly put the pieces back together again.

Option 2 Negative Consequences. Non-appropriation would result in a series of cascading events that would lead to increased costs associated with the state's debt. It could also lead to a contagion effect impacting other Rhode Island issuers and even taint the business environment. Additionally, holders of Rhode Island debt would experience a decrease in the value of their bonds. The following chain of events would occur:

- Rating agencies would downgrade the state's debt ratings for GO, MO, and appropriation debt because the non-appropriation on the state's moral obligation on the 38 Studios Bonds would call into question the state's willingness to pay its other obligations. For the reasons set forth in the Rating Agency Reaction section, we believe the state's ratings would be reduced below investment grade or to "junk bond" status.
- The reliability of the state's moral obligation would be questioned; investors would weigh appropriation risk more heavily, reducing market access for all debt requiring appropriation.
- Where market access remained, interest rates on subsequently issued debt would be significantly higher for all types of debt including GO due to lower ratings and the diminished universe of investors willing to purchase the state's debt.
- Opportunities to refund existing bonds for savings would be diminished because of the higher yields required to access the market.
- Debt with a ratings based interest formula would incur higher interest cost and we believe that at least one existing bond issue would be in default as a result of rating downgrades.
- The state's tarnished reputation in the debt markets would potentially cause a contagion, harming other Rhode Island issuers.
- Increased yields would decrease the value of Rhode Island's outstanding bonds for all investors, including Rhode Island citizens.

- The negative effects on the reputation of the state would likely have additional financial impacts by harming the business climate in Rhode Island.

Option 2 Counterpoint. The flip side of the argument includes various issues supporting the point of view against appropriating funds.

- The state got a bad deal; the state should not have agreed to put its moral obligation on these bonds for this project.
- Investors understood both the project and appropriation risks and the market established an interest rate commensurate with those risks, a rate significantly higher than what the state normally pays on its debt.
- The Bonds are insured.
- The state's obligation is a moral obligation rather than a legal obligation.
- The funds could be used more beneficially on other projects.
- Other entities have chosen not to make debt payments, opting for a strategic default because the cost of debt service was higher than the value of the project.

This report attempts to address the bullet points in the above lists.

Summary of Analysis

What We Analyzed. We focused on the most significant cost drivers that we could reasonably quantify:

- The most significant impact following an Option 2 decision would be the increased cost of future debt. The bulk of this report explains the analysis undertaken to quantify the expected increase. We assumed the state would need to continue to issue debt to fund its capital plans, and would follow its current capital plan in doing so. Though it is possible the capital plans would have to be reduced, that would have another set of costs and opportunity costs even more difficult to quantify. We felt the most straight forward way to quantify this element was to determine the incremental cost of following the existing plan. One of the benefits of maintaining a high credit rating (or a high credit score for an individual) is that lenders put faith in the established track record of being paid, and therefore compete harder to earn your business, driving your cost of borrowing lower in a virtuous cycle. Option 2 would reverse this cycle, leading to higher costs.
- Two other potential costs we quantified are smaller in magnitude and are less complex, so have been handled more briefly in this report.
 - Interest costs associated with variable rate debt currently outstanding will increase following a ratings downgrade. We looked at how this would vary with some simple assumptions related to future interest rates.
 - Lost opportunity to refund outstanding debt for a savings. On a routine basis, the state has successfully refunded outstanding debt when doing so resulted in debt service savings. That is the primary benefit of issuing callable debt. The expected ratings downgrades would likely increase yields on future issuance to levels that would eliminate this opportunity in the future.
- We also quantified several costs that would not impact the state directly, but would affect constituents.

- Increased costs to Rhode Island cities and towns, universities and hospitals, and other Rhode Island entities that issue debt due to the reputation of the state in the debt markets.
 - The expected market value loss of outstanding Rhode Island bonds to current bond holders.
- We mention, but do not attempt to quantify, the cost due to reputational harm with respect to state employees, state vendors, and the greater business community.

Key Factors in the Cost of Future Debt Analysis. The heart of the analysis is evaluating the extent to which interest rates on the state's debt would increase after a non-appropriation. There are several major factors to assess.

- The timing and extent of ratings downgrades along with the length of time over which the downgrades would persist.
- The increase in credit spreads associated with the lower rating levels.
- The projected issuance of each type of debt to which rate increases would apply over the future time horizon of the impact.
- The degree of uncertainty for each of the above will be characterized and used to estimate Best, Middle, and Worst cases. Note that actual cost increases could be less than or worse than the Best and Worst case scenarios described.

Results Summary

Option 1. Table 1 shows the Uses of the 38 Studios Bond proceeds. Note that of the \$75 million in bond proceeds, about \$23.4 million was set aside for debt service in the Capital Reserve Fund and the Capitalized Interest Account. Table 2 shows the annual debt service and its present value that will be paid if the state honors its moral obligation. The remaining debt service after the 5/1/2014 interest payment is \$86,802,093.75. After subtracting other funds that are available of \$447,648.00, the total amount left requiring appropriation through 11/2/2020 is \$86,354,445.75. The present value calculated to 5/1/2014 using a discount rate of 5% is \$72,920,150.61.

Option 2. Table 3 compares Option 1 and various estimated outcomes under Option 2: our Best, Middle, and Worst Case estimates of the incremental costs associated with existing debt and future debt issuance. The various assumptions and detailed results behind the totals are described later in this report. As can be seen in Table 3, even with our most lenient assumptions under the Best Case scenario, the decision not to appropriate, would cost about \$36.0 million more than paying the debt service (net cost) and a net present value cost to the state of about \$13.6 million over the long-run. In our Worst Case scenario, the net cost would be \$361.8 million and the net present value cost would be \$218.9 million, but we believe the cost would be closer to the Middle Case with a net cost of \$125.6 million and net present value cost of about \$71.9 million. In addition, as described briefly in this report, there are significant other economic consequences not quantified in Table 3.

Table 3 - Net Present Value Comparison of Option 1 and Three Scenarios of Option 2

Summary of Key Costs		Scenarios		
Option 1 vs. Option 2		Best	Middle	Worst
Option 2 - Incremental Cost to the Call Date of Future Bonds Issued with Higher Yields	\$109,085,595		\$188,260,260	\$420,729,266
Option 2 - Potential Increased Interest Cost of Variable Rate Debt (I-195 Bonds)	\$4,638,110		\$15,018,578	\$18,839,534
Option 2 - Potential Lost Opportunities to Refund Currently Outstanding Bonds for a Savings	\$8,632,229		\$8,632,229	\$8,632,229
Option 2 - Total Incremental Modelled Costs Related to Existing and Future Debt to the Call Date	\$122,355,934		\$211,911,067	\$448,201,029
PV @ 5%	\$86,561,234		\$144,784,094	\$291,776,214
Option 1 - Honor Moral Obligation 38 Studios Bonds Debt Service	\$86,354,446		\$86,354,446	\$86,354,446
PV @ 5%	\$72,920,151		\$72,920,151	\$72,920,151
Option 2 Minus Option 1				
Net Cost Over Modelled Time Horizon	\$36,001,488		\$125,556,621	\$361,846,583
Net Present Value Cost	\$13,641,084		\$71,863,943	\$218,856,063
Additionally, though not a direct cost to the State Loss in Value of Rhode Island Bonds Outstanding	\$212,000,000		\$233,500,000	\$255,000,000

Table 3 Discussion. Table 3 includes a summary of our quantitative findings, the details of which are explained in this report. Option 1 is fairly straight forward. The debt service on the 38 Studios Bonds less funds on hand is \$86,354,446 with a present value (using a 5% discount rate) of \$72,920,151. This does not vary based on our assumptions (which are explained later) and thus is a constant across all three scenarios.

The costs associated with Option 2 are much less certain, and we have attempted to give a sense of the range by using a Best Case, Middle Case and Worst Case. This does not mean that we know that the costs will necessarily fit in the range between the Best Case and the Worst Case but we believe it highly likely. We also believe that the costs would end up being closer to the Middle Case than either of the extremes shown. Each of the major costs analyzed will have some fluctuation over time, or said another way, the individual events within each category will vary, so that over time the instances will tend to average out and the expectation resolves around the Middle Case. Examples of this will be described for each major cost component.

If the General Assembly does not appropriate funds for debt service, we expect the state's bond ratings will be downgraded below investment grade, which will increase interest rates that the state pays for future bond issues for some period of time. The first line of the table shows our estimate of the

incremental interest cost on future bond issues until the first call date of each (\$188,260,260 in the Middle Case). This analysis assumes that the state's bond rating will have recovered by the first call date of each issue and that the state will be able to refund the bonds without continuing to pay the additional credit spreads. Table 8 included later on in this report also shows our estimate of the incremental interest cost on future bonds issues until the final maturity of each.

Another potential cost of Option 2 relates to the outstanding bonds that were issued to finance the I-195 initiative. Those bonds will be in default if the state's bond rating is downgraded to the levels we anticipate. Under the terms of the documents, the creditor can elect to charge a significantly higher interest rate or accelerate the bonds. Our numbers assume that the creditor elects to charge a higher interest rate, and that the higher rate stays in effect through 4/1/2023, the date through which the bank has committed to hold the bonds. After that date, the bonds would need to be refinanced or renegotiated, but we do not address that event. We also assume no further cost impact related to these bonds beyond that date in any of our scenarios, though depending on the state's situation in 2023, there could be. The cost varies across scenarios based on the assumption for 1-Month LIBOR, the index used to calculate the variable interest rate on the bonds. We estimate the increased interest expense on those bonds would be \$15,018,578 in the Middle Case.

A third potential cost of Option 2 would be the lost opportunity to refund outstanding callable debt for a savings. The higher interest rates faced by a non-investment grade borrower would limit or preclude the savings opportunities. We estimate the future refunding savings opportunity to be \$8,632,229 assuming that all callable maturities are refunded on the call date and hit a PV savings target of 3%. There could be future periods during which market rates are high and refunding is delayed past the call date, however, the state routinely exceeds the 3% savings level, so we believe that combining both factors, this is a reasonably conservative measure.

The "Total Incremental Modelled Costs" totals these three major costs associated with Option 2. Under the Middle Case, these total \$211,911,067 with a present value using a 5% discount rate of \$144,784,094.

The difference between Option 1 and the aggregate costs of Option 2 show the additional costs the state may pay as a result of not appropriating funds for debt service on the 38 Studios Bonds. This amounts to \$125,556,621 with a present value of \$71,863,943 in the Middle Case.

One other effect that we thought was worth highlighting in our summary is the impact on the market value of outstanding Rhode Island bonds that we expect would follow the decrease in rating on the state. While this does not directly impact the state, it certainly affects its residents. In the Middle Case, we estimate that bondholders will lose \$233,500,000 in market value, and we estimate that about 35% of the bonds are held by Rhode Island residents.

The table does not include all of the negative consequences that we believe will follow from not appropriating funds for debt service on the 38 Studios Bonds. These are detailed under the heading "Other Negative Consequences of Non-Appropriation." The table also assumes that a \$75 million Historic Structures Tax Credit Fund financing is accomplished in FY 2014 before any increase in credit spreads is experienced. If not, we believe this would add an incremental additional cost in the range of \$6.6 million to \$16.4 million, with a present value in the range of \$5.4 million to \$13.6 million using the same assumptions in terms of incremental credit spreads as we used for the rest of our analysis.

The remainder of this report explains our findings in more detail. The focus is on the ratings impact, modelling associated with determining the increase in credit spreads the state would face, and the relevant case studies we found.

BACKGROUND

38 Studios Bonds

On November 2, 2010, RICC issued the 38 Studios Bonds. RICC was created pursuant to Chapter 64 of Title 42 of the Rhode Island General Laws in order to, among other things, "promote and encourage the preservation, expansion, and sound development of new and existing industry, business ... in the state, which will promote the economic development of the state and the general welfare of its citizens." In June 2010, pursuant to Chapters 026/029 of the Rhode Island Public Laws of 2010, RICC was authorized to create the Job Creation Guaranty Program which permitted RICC to issue bonds or otherwise guarantee debts of up to \$125 million in order to "induce lending to companies growing their employment in Rhode Island."

This law provided for the establishment of a guaranty reserve fund which would be funded by a portion of RICC's receipts, including any guarantee fees. To the extent the guaranty reserve fund did not have sufficient moneys to satisfy its obligations, the law provided for a mechanism for the executive director of RICC to notify the governor of the shortfall and the governor was required to include this amount in his annual budget to the general assembly. Any sums appropriated by the general assembly would be used by RICC to make payments due on such guarantees or bond obligations.

RICC issued the 38 Studios Bonds and loaned the proceeds to 38 Studios, LLC to finance the relocation of 38 Studio's corporate headquarters and primary place of business to Rhode Island and the establishment and operation by 38 Studios, LLC of a video gaming studio, to fund a capital reserve fund and a capitalized interest fund, and to pay costs of issuance. The 38 Studios Bonds were issued as two terms bonds and one serial bond, with interest rates ranging from 6% to 7.75% depending on the maturity. Pursuant to the Loan and Trust Agreement (the "Agreement") executed by RICC, 38 Studios, LLC and The Bank of New York Mellon Trust Company, N.A., as trustee, 38 Studios, LLC agreed to make monthly interest payments, commencing November 1, 2012 and monthly principal payments, commencing November 1, 2013 so that there would be sufficient funds on hand to pay debt service on the 38 Studios Bonds on each May 1 and November 1. As security for the loan payments, 38 Studios, LLC pledged a security interest in all of its gross receipts and its assets, both tangible and intangible. In addition, certain subsidiaries of 38 Studios, LLC granted guarantees and pledged certain additional assets. In the event 38 Studios, LLC defaulted on loan payments and monies in the Capital Reserve Fund were used to pay owners of the 38 Studios Bonds, the Agreement set forth procedures regarding requests to the General Assembly to appropriate an amount of money required to restore the Capital Reserve Fund to the Minimum Capital Reserve Requirement (equal to the maximum annual debt service payable in any year on the 38 Studios Bonds). As additional protection for the bondholders to the extent 38 Studios and the General Assembly did not pay, there was an insurance policy from Assured Guaranty Municipal Corp.

The 38 Studios Bonds are subject to optional redemption prior to maturity but only by paying by an amount that attempts to make the bondholder whole for accepting the early payment. In effect, this would require a lump sum payment derived from a formula based on the net present value (based on the rate of U.S. treasuries until the call date plus 35 basis points) of the future principal and interest payments that will not be paid because of the optional redemption of the bonds, plus any accrued interest.

Based on required filings by 38 Studios showing the meeting of various milestones, on or before April 22, 2011, 38 Studios, LLC had relocated its headquarters and project Copernicus studio to Rhode Island and created at least 125 full-time jobs in the state with an average annual wage not less than \$67,500 per year. By September 15, 2011, 38 Studios, LLC had entered into a distribution agreement for its project Copernicus and by December 15, 2011, had created at least an additional 125 full-time jobs in Rhode Island with an average annual wage of not less than \$67,500 per year.

After each of the milestones, 38 Studios was entitled to receive additional proceeds from the Series 38 Studios Bonds. The final milestone met on December 15, 2011 entitled 38 Studios to the balance of the Project Fund. However, by June 2012, 38 Studios filed a voluntary Chapter 7 bankruptcy case and ceased operating. On September 12, 2012, a receiver was appointed for the assets of 38 Studios, LLC and various affiliates and on October 16, 2012 and October 23, 2012 the receiver conducted a sale of certain tangible assets. These assets were pledged as collateral for the bonds. In November 2012, RICC sued various individuals and entities involved with the loan to 38 Studios alleging fraud, negligence, breach of fiduciary duty and other charges.

As originally planned, Interest payments due on the 38 Studios Bonds between May 1, 2011 and November 1, 2012 totaling \$10,604,076.63 were provided for by using the amounts in the Capitalized Interest Account. 38 Studios failed to make its first loan payment on November 1, 2012 and was then in default under the Agreement. As a result of the failure of 38 Studios to make loan payments commencing November 1, 2012, the Trustee was required under the Agreement to transfer the funds in the Capital Reserve Fund to the principal and interest account of the Sinking Fund to cover the \$2,654,706.25 payment due May 1, 2013 and the \$10,904,706.25 payment due November 1, 2013.

The Governor included \$2.5 million, the amount needed to make the May 1, 2014 interest payment, in his fiscal year 2014 budget. There was considerable debate in the General Assembly whether to appropriate any funds for the 38 Studios Bonds. The extensive debate led Moody's Investors Services, Inc. on June 17, 2013 to downgrade the financial strength rating with respect to the 38 Studios Bonds two notches from "A2" to "Baa1" and put the other Job Creation Program obligations, the state's general obligation bonds and appropriation debt on watch for possible downgrade due to "the considerable uncertainty surrounding the state legislature's willingness to appropriate funds requested in Governor Chafee's budget to replenish the capital reserve fund for the 38 Studios bonds. ... The potential for a decision by the legislature to withhold funds to replenish the debt service reserve signals potential unwillingness to honor its obligations to bondholders. Selectivity regarding which obligations to honor leads us to question our confidence in the full faith and credit of the state and its willingness to honor its other debt obligations compared to otherwise similarly-rated states."ⁱ Ultimately the proponents of making the payment prevailed and in July 2013, the General Assembly included an appropriation of \$2.5 million, which was estimated to be the amount necessary, together with amounts set aside in the principal and interest account of the Sinking Fund (transferred from the Capital Reserve

Fund), to meet debt service payments in fiscal year ("FY") 2014. After the May 1, 2014 interest payment, the Capital Reserve Fund will have \$447,648 (based on the latest data from RICC).

The General Assembly asked that the Director of Administration commission an independent study to look at the financial consequences if the General Assembly decided not to appropriate funds to pay the debt service on the 38 Studios Bonds. It was requested that this study be completed in time so that the General Assembly would be better informed prior to having to make its appropriation decision for FY 2015. After an extensive request for proposals ("RFP"), the state received no responses. In January 2014, SJ Advisors learned about the RFP and inquired about the project, which ultimately led to being engaged to produce this report.

The Governor's budget for FY 2015 includes \$12.335 million for the 38 Studios Bonds. This money is the amount required, together with available funds in the Capital Reserve Fund, to bring the Capital Reserve Fund back to the required level and to pay for FY 2015 debt service (the November 1, 2014 and May 1, 2015 payments). See Table 2.

Moral Obligation Bond

The 38 Studios Bonds are so-called "moral obligations" of Rhode Island. The Municipal Securities Rulemaking Board describes a moral obligation bond as a "bond, usually issued by a state or agency, that is secured by a non-binding covenant that any amount necessary to make up any deficiency in pledged revenues available for debt service will be included in the budget recommendation made to the state legislature or other legislative body, which may appropriate moneys to make up the shortfall. The legislature or other legislative body, however, is not legally obligated to make such an appropriation. Unlike a general obligation pledge, the moral obligation bond does not require voter approval and does not have the state's official pledge of its full faith and credit." Generally, there is a reserve fund established that is required to be maintained at a specified level, typically maximum annual debt service, and in the event of a deficiency, the appropriate government official is notified of the amount of the deficiency. Generally, that official is then required to request an appropriation from the appropriate legislative body to make up any shortfall.

The concept of issuing obligations secured by moral obligations is reported to have originated in 1960 with housing deals in New York State.ⁱⁱ Different reasons have been given for the use of moral obligations, including improving the security, making the bonds more marketable, and lowering the interest rate. It is often used to avoid incurring "debt" to avoid constitutional or legal limitations on debt or to avoid voter requirements. The practice of issuing debt secured by a moral obligation is still quite prevalent. According to Standard & Poor's ("S&P"), as of the April 3, 2014, it had ratings on moral obligation bonds that had a total par value of \$16.6 billion at the time of issuance.ⁱⁱⁱ The value of a "moral obligation" offered to support a bond is premised on the notion that although it is not a legal obligation, the provider of the moral obligation will in fact honor it. Ultimately if providers do not honor their moral obligations, the market will stop assigning any value to those moral obligations. The market has grown because the vast majority have been met.

The Official Statement for the 38 Studios Bonds that was used to offer the bonds to investors clearly indicated that there was no legal obligation on the part of the state – that the Governor would include the money in his proposed budget but that the General Assembly was not obligated to appropriate the money. Why would investors rely on such a moral obligation if it is not legally bonding? The principal

reason is that they believe that the state would honor the moral obligation to avoid the negative credit rating effects of not honoring the moral obligation, or other negative impact on the future issuance of other obligations, both legal and moral.

In fact, we were unable to find any state that had failed to honor its moral obligation with respect to bonds. The last state that appears to have defaulted on its debt is the state of Arkansas in 1933, a point mentioned in many articles.

There are many examples of states that have honored their moral obligations. For example, these include the State of Illinois (has appropriated funds for 6 different deals for two separate state authorities from fiscal 2000 to 2011), Louisiana (appropriated funds for bonds issued by the Louisiana Transportation Authority), New Jersey (has appropriated funds to replenish the debt service reserve fund for bonds issued by the South Jersey Port Corporation), and New York State (has appropriated \$162.8 million). In Rhode Island, the state appropriated funds for two deals and the City of Providence appropriated funds for the Port of Providence in fiscal years 2000-2002.

As described in more detail below and in Exhibit A, there have been some situations where local governments have elected not to appropriate funds for leases or other obligations which were "subject to appropriation" but these have been limited. Exhibit B includes some other examples which we thought were worth mentioning but we felt were less relevant.

Bond Insurance: Protection for Bondholders Not For State

The 38 Studios Bonds are supported by a bond insurance policy from Assured Guaranty Municipal Corp. ("Assured Guaranty") pursuant to which Assured Guaranty has guaranteed that bondholders will be paid their regularly scheduled principal and interest payments. The insurance policy was purchased because it was determined that it would lower the interest rate on the 38 Studios Bonds and that the projected interest savings over the life of the bonds would be greater than the cost of the policy.

The bond insurance policy was not purchased by the State of Rhode Island to protect itself in the event that 38 Studios failed, it was purchased with proceeds of the 38 Studios Bonds, to protect the bondholder. If the state fails to appropriate the money for debt service and Assured Guaranty pays, Assured Guaranty becomes a creditor of the state; it steps into the shoes of the bondholder. This is very different than the typical insurance policy one purchases. If you buy insurance for your house and your house is burned down by fire, there is no obligation to repay the insurer. And from the bondholder perspective, bond insurance works the same way. If the obligors on the bonds (e.g. 38 Studios and the state) do not pay the bonds, Assured Guaranty will pay the bonds and the bondholders have no obligation to repay the insurer. However, from the obligors' perspectives, if Assured Guaranty pays, the obligors are still obligated to pay -- they just pay Assured Guaranty instead of the bondholders. Again, the reason the policy was purchased was to lower the interest rate on the bonds, such that the interest savings would be greater than the cost of the policy. In that respect the moral obligation is lower than it would have been.

Nonetheless, if one assumes that Assured Guaranty will meet its obligations with respect to the 38 Studios Bonds, it may seem more palatable to not pay the bond insurer. After all, there will not be small, individual investors who are not repaid. Only Assured Guaranty will be harmed. Assured Guaranty saw itself as a potential creditor of the state. It agreed to insure the 38 Studios Bonds only

after a careful review of the security package, including the state's moral obligation. We are confident that Assured Guaranty would not have issued this bond insurance policy unless Rhode Island agreed to provide its moral obligation. The combination of the Job Creation Guaranty Program passed by the General Assembly, plus the commitment of the Governor to include any shortfall in his budget and the past history of other states (including two instances in Rhode Island) and local governments honoring their moral obligations led them to believe that if called upon, Rhode Island would make the necessary payment. Then why pay for insurance if the state is going to honor its moral obligation anyway? Investors have additional assurance that if the state is unable to pay, they will be made whole.

In addition to the rating impact discussed below, if the General Assembly elects not to appropriate funds, the likely outcome would be a lack of access to bond insurance policies. Since bond insurance is purchased when it is economically beneficial, the loss of access to bond insurance will have an adverse impact on the state when it issues bonds in the future. There are a limited number of bond insurers and we would not be surprised if Assured Guaranty elected not to do business with the state of Rhode Island for the foreseeable future, and certainly other insurers might be more hesitant to do so, as well. For bond insurers who are willing to do business with the state, the likely impact will be an increase in required bond insurance premiums, thereby exacting another cost on the state.

In determining the impact on the state's credit ratings, the rating agencies will not take into account that the bonds were insured. They will look at whether the state met its debt obligation.

Other Types of Obligations

As we lay out the various potential costs of not honoring the moral obligations, it will be helpful to understand the other types of obligations issued by states and other governmental entities. These include:

General obligation bonds - generally, a bond issued by a state or local government that is payable from general funds of the issuer. It typically means that the "full faith and credit" of the issuer is pledged. Often, requires voter approval to issue general obligation bonds.

Revenue bonds - generally, a bond that is payable from a specific stream of revenue and to which the "full faith and credit" is not pledged.

Appropriation bonds - an obligation where the requirement to pay debt service is contingent upon inclusion of the debt service payment in the issuer's adopted budget. Types of appropriation bonds include certificates of participation and lease revenue bonds. These are similar to moral obligation bonds in that the obligation to make payments is subject to the money being appropriated for that purpose. In its June 2013 report^{iv}, Moody's made exactly this point. "Rhode Island has a number of appropriation-backed credits, primarily lease debt. The legislature is also required by state statute to appropriate funds for its GARVEE and motor fuel tax bonds, even though they are not secured by general fund revenues. There is little distinction between the state's appropriation debt and the 38 Studios moral obligation debt. The main distinction is that the governor is required to request an appropriation for 38 Studios only in the event of a draw on the debt service reserve fund. For both categories the legislature is not legally obligated to appropriate the funds. The uncertainty pertaining to the 38 Studios bonds therefore extends to the legislature's willingness to pay debt service on the state's other appropriation-dependent debt." (Moody's went on to also say: "An environment in which any

debt service payments are considered optional in turn undermines our confidence in the full faith and credit of the state.")

OUR APPROACH TO ASSESSING THE IMPACT OF NON-APPROPRIATION ON FUTURE DEBT

In trying to assess the impact of not honoring the state's moral obligation, we focused on the state and related entities' ability and cost to borrow money. What will be the impact on the rate paid by the state on its general obligations? Will the state be able to issue obligations that are subject to appropriation and if so, at what rate? What will be the impact on the rate paid on debt secured by a specific stream of revenue? Will the state's moral obligation be given any value in the market place? (The state has issued other MO bonds to good end.)

We identified as many examples as we could of similar situations where a city or town had not honored its moral obligation or had failed to appropriate funds due to an unwillingness to pay as opposed to those who failed due to an inability to pay. Although there has been some increase, cases of unwillingness to pay are limited in number. In its special comment entitled "Recent Local Government Defaults and Bankruptcies May Indicate a Shift in Willingness to Pay Debt" dated July 19, 2012, Moody's indicated that from 1970 to 2011, only one out of 71 cases of Moody's-rated defaults involved a local government that defaulted due to lack of willingness rather than ability to pay. We were unable to find any states that have defaulted on bonds since the Great Depression, and those earlier cases were not reviewed due to age, economic environment at the time, and because they fall more into the ability to pay category. Furthermore, it is our understanding that in cases like Arkansas, the debt ultimately was paid, which would be similar to our "Option 3". By necessity we rely on the local government cases (See Exhibit A) and conclude there will be a similar outcome for Rhode Island. As noted in more detail below, at least one rating agency has indicated that the rating impact on the state will be the same as the rating impact on the cities and towns that have defaulted.

The most critical analysis, determining the incremental cost of future debt in the event of a default, has three components that fit together: ratings action (to what degree the state's rating is downgraded and for how long), the impact of the reduced rating on credit spreads (the extent to which interest rates increase for the state due to the downgrades), the amount of debt the state issues at these higher rates.

Impact on Credit Rating Due to Non-Appropriation. Ratings are a factor of an entity's ability to pay and willingness to pay. While rating agencies see bankruptcy as an indication of unwillingness to pay, it also is an indication of inability to pay and so we elected not to use these bankruptcy cases as part of our data set. We thought it was more valid to use those cases where there appeared to be an ability to pay, but the entity chose not to pay. Based on this analysis, we reached a conclusion as to the likely impact on the state's credit rating by S&P and Moody's Investors Service ("Moody's") if the payment is not made.

Yield Impact of Lower Ratings. Next we looked at historical market data to see the credit spreads or yield difference between highly rated debt matching the state's current rating ("AA"/"Aa2"/"AA" from S&P/Moody's/Fitch) and lower rated debt, which would be representative of the state's debt after a non-appropriation event and subsequent downgrades. These spreads vary over time, so we looked at the average difference, as well as two standard deviations above and below for various time periods to establish a range over which the yield on future debt issuance would likely increase.

Cost Impact of Higher Yields on Future Debt Issuance. We then looked at the state's issuance patterns for different types of debt and at the state's capital plans for the next 5 years, and had discussions with the Director of the Office of Management and Budget and Executive Director/Budget Officer in the Budget Office to reach a conclusion as to how much debt would likely be issued during the time period affected by lower rating levels. We then calculated the incremental cost to the state of issuing debt with higher credit spreads due to the lower rating. We assumed that the mix of the types of debt would stay the same, although in reality the state may be forced or find it beneficial to issue more debt as general obligation debt due to market reaction to future moral or subject to appropriation debt.

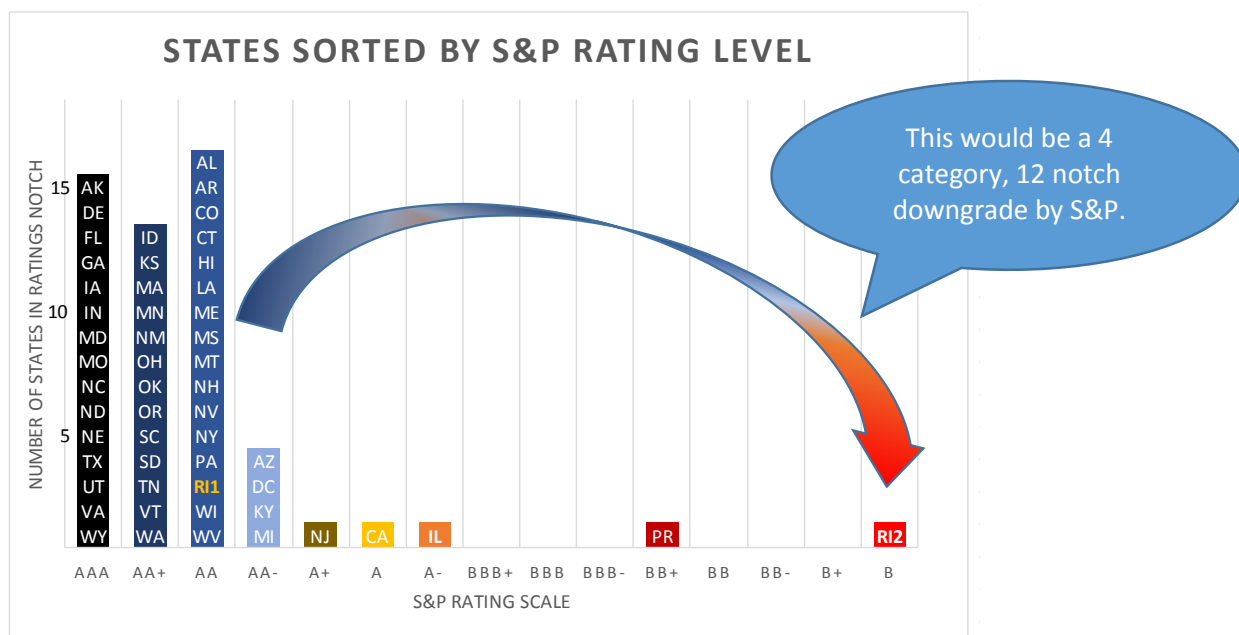
RATING AGENCY REACTION

Likely Impact on Ratings

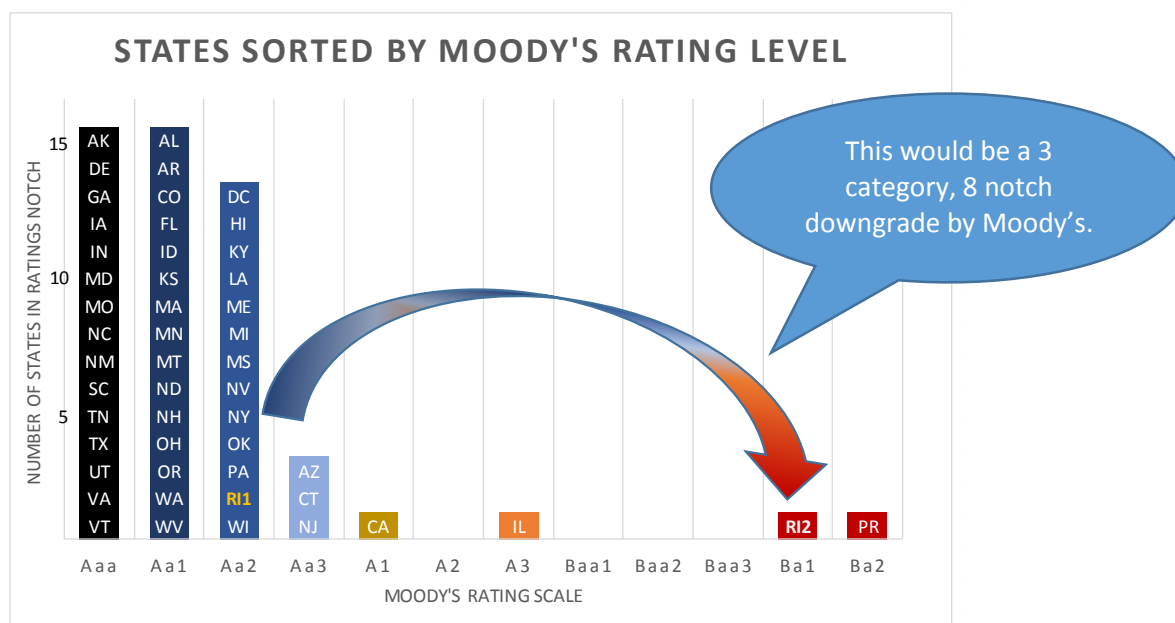
Based on published ratings methodologies^v, ratings reports of case studies, and communication with S&P and Moody's, we conclude that Rhode Island debt would be downgraded below investment grade to speculative status in the single B category by S&P and the Ba (double B equivalent) category by Moody's. Bonds at this level are often referred to as non-investment grade or "junk bonds". The charts below illustrate the change in ratings that we believe the state would experience. Following the charts is Table 4 which shows in detail the various rating categories.

In Charts 1 and 2 below, we have shown Rhode Island's current rating (depicted as "RI1") and what we believe will be Rhode Island's rating if it fails to appropriate for the 38 Studios Bonds and after the rating agencies determine it is likely to cause a default on the bonds or after the actual default in November 2014 (depicted as "RI2").

Chart 1 – Expected Change to Rhode Island's GO Rating by S&P Following Non-Appropriation



Source for current ratings: U.S. State Ratings And Outlooks: Current List dated April 23, 2014 by S&P (except DC and PR, which reflect the latest ratings shown on the S&P website as of 4/30/14). Note that AZ, CO, ID, IN, IA, KS, KY, NE, ND, SD, TX and WY are issuer credit ratings; others are ratings of general obligation debt.

Chart 2 – Expected Change to Rhode Island’s GO Rating by Moody’s Following Non-Appropriation

Source for current ratings: www.Moodys.com, ratings current as of 2/7/2014 (except DC and PR, which reflect the latest rating shown on the website on 4/30/2014). Note that AZ, CO, ID, IN, IA, KS, KY, and ND are issuer credit ratings; others are ratings of general obligation debt.

As noted above, rating agency decisions are based on both ability to pay, and willingness to pay. These two factors are quite different. Ability to pay is a function of the economic situation of the entity being rated and looks at factors such as the strength of the economy, tax collections, debt loads, etc. Willingness to pay is different. An entity may have an ability to pay its debt but being unwilling to so. Rating agencies treat these situations differently and we found that where unwillingness to pay is evident, they specifically mention it in their write ups. Thus, in trying to determine what action the rating agencies would take, we specifically focused on those cases where the principal factor driving the default was willingness to pay.

While each rating agency has somewhat different criteria, all three see it as a negative factor for other appropriation debt and general obligation debt if an entity chooses not to honor any of its obligations, legal or moral. The ratings approach of each of the rating agencies do evolve over time as they get "older and wiser" and so the more recent deals are the most helpful in terms of determining the most likely outcome. What follows is a summary of what we found in terms of likely impact to the state's credit ratings. We refer you to Exhibit A for more details.

Table 4 – Description of Bond Ratings^{vi}**Bond Rating Definitions (Long-term Ratings)**

Moody's	S&P	Fitch	Description	
Investment Grade				
Aaa	AAA	AAA	Prime	An obligor has EXTREMELY STRONG capacity to meet its financial commitments.
Aa1	AA+	AA+	High grade	An obligor has VERY STRONG capacity to meet its financial commitments. It differs from the highest rated obligors only in small degree.
Aa2	AA	AA		
Aa3	AA-	AA-		
A1	A+	A+	Upper medium grade	An obligor has STRONG capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.
A2	A	A		
A3	A-	A-		
Baa1	BBB+	BBB+	Lower medium grade	An obligor has ADEQUATE capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.
Baa2	BBB	BBB		
Baa3	BBB-	BBB-		
High Yield / Junk ↓				
Ba1	BB+	BB+	Non-investment grade. Speculative	An obligor is LESS VULNERABLE in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.
Ba2	BB	BB		
Ba3	BB-	BB-		
B1	B+	B+	Highly speculative	An obligor is MORE VULNERABLE than the obligors rated 'BB', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
B2	B	B		
B3	B-	B-		
Caa1	CCC+	CCC	Substantial risks. Extremely speculative	An obligor is CURRENTLY VULNERABLE, and is dependent upon favorable business, financial, and economic conditions to meet its financial commitments. In default with little prospect of recovery.
Caa2	CCC			
Caa3	CCC-			
Ca	CC			An obligor is CURRENTLY HIGHLY-VULNERABLE.
	C			
C	D	DDD	In default	An obligor has failed to pay one or more of its financial obligations (rated or unrated) when it became due.
/		DD		
/		D		
WR				Rating withdrawn for reasons including: debt maturity, calls, puts, conversions, etc., or business reasons (e.g. change in the size of a debt issue), or the issuer defaults.

Source: www.bondsonline.com

S&P

Paragraph 13 in S&P's methodology for U.S. States dated January 3, 2011 specifically addresses willingness to support debt. That paragraph states:

"We view U.S. states as generally having a strong commitment to honor their legal obligation to pay debt even during difficult or stressful economic cycles. If we believe there is a change in a state's willingness to support its debt, we will assign a rating below what is indicated, possibly by several categories. For example, were a state to choose not to pay obligations we view as debt subject to annual appropriation, we would lower the state's GO rating or ICR [Issuer Credit Rating], as detailed in our appropriation-backed obligations criteria ("Appropriation-Backed Obligations", published June 13, 2007). Were state officials who are charged with funding debt to suggest an unwillingness to fund debt in accordance with the priority payment status, we would likely assign the state a GO rating or issuer credit rating that is no higher than the "BB" category. **The rating would be no higher than the "B" category and would likely be lower if we determined that this lack of willingness was likely to threaten a pending debt payment.**" [emphasis added]

The Appropriation-Backed Obligations criteria referenced above simply indicates that "failure to make an appropriation will result in a downgrade of both the appropriation-backed obligation and the general obligation of the entity, as a reflection of the willingness of an entity to make good on its obligations."

We were not entirely clear on the language in the next to last line in the Paragraph 13 cited above where it refers to "an unwillingness to fund debt in accordance with **the priority payment status**" [emphasis added] and had a call with both the Senior Director - Analytical Manager and Director - U.S. States Group at S&P, and they confirmed that under S&P's criteria, if a state fails to appropriate funds, that the credit rating would go down to no higher than "BB", and to no higher than "B" if the non-appropriation was likely to cause a default on a pending debt payment. Appropriation debt would stay one notch below, and so would move to "B", and subsequently to "B-". They helpfully also provided the rating reports on the following three cities to show S&P's recent actions.

The following cases are described in more detail in Appendix A; in all three the general obligation or ICR ratings ultimately were reduced to "B" as a result of the lack of appropriation leading to a default. None of these cases involved missed payments on GO debt, but the GO ratings were all downgraded to junk status. These are described briefly below.

1. The city of Vadnais Heights, Minnesota had agreed to make lease payments, subject to appropriation, for debt service if the revenues from a sports facility were insufficient. The city council opted not to appropriate funds for debt service and the lease revenue bonds defaulted. Despite "generally strong" other factors, S&P rated Vadnais Heights general obligation bonds, "B" and explained that the stable outlook reflected their view "of the city's recent unwillingness to support its appropriation debt, and accordingly, the city's very weak management."
2. Moberly, Missouri's long-term general obligation bond rating similarly was reduced to "B"/stable and its appropriation debt (certificates of participation) reduced to "B-"/stable when it failed to appropriate revenues for debt service on bonds issued by Moberly Industrial Development Authority.

3. Lombard, Illinois fate was the same; its issuer credit rating was lowered to "B" due to a failure to appropriate funds that triggered a payment default for bonds issued by the Lombard Public Facilities Corp.

Moody's

We do not have the same degree of confidence in terms of Moody's since their ratings criteria are less definitive on the extent of the impact and their responses to our questions did not provide guidance beyond what was in published reports.

Moody's US States Rating Methodology^{vii} spells out a rating scorecard and points to certain additional key rating factors and sub-factors that could shift a rating up or down. One of these factors is Additional Governance Factors and it includes heightened risk of lack of appropriation for debt service, or other nonpayment of debt service. The only guidance in the methodology is that these additional factors might bring a rating up or down anywhere from half a notch to multiple notches.

Moody's downgraded the 38 Studios Bonds to "Baa1" from "A2" last year in the midst of the General Assembly's discussions in June 2013. It also placed the Job Creation Guarantee rating under review for possible further downgrade. Moody's also put the state's general obligation and related appropriation bond ratings under review for downgrade. These included lease participation bonds, RI Convention Center Authority bonds, RI Economic Development Corporation Motor Fuels Tax Revenue Bonds, RI Economic Development Corporation GARVEE bonds, and the RI Economic Development Corporation Historic Tax Structures Bonds. In a few sections in this report we have quoted from Moody's June 2013 report. It is clear that it will downgrade the state's moral obligation debt, appropriation debt and general obligation debt. Under the heading "WHAT COULD MAKE THE RATING GO DOWN," the first two items are: "* For RIEDC Job Creation Guarantee Program debt, the state GO and lease appropriation debt: **Failure to appropriate funds to pay debt service on 38 Studios or any other appropriation-dependent debt which would likely have a multi-notch impact.** * For the state: Failure to honor its legal or moral obligations to bondholders."

So it is known that there will be a multi-notch impact, but to try and determine how much of an impact, we looked at some recent examples.

1. On Vadenais Heights (discussed above), Moody's downgraded its general obligation bonds from "Aa2" to "Ba1" as a result of the city's decision to terminate its lease. Moody's stated: "The city's failure to appropriate represents a significant lack of willingness to pay on a lease obligation that supported debt issued in the capital markets."
2. In the case of the City of Buena Vista, Moody's downgraded the City's issuer rating from "A1" to "Ba1" due to the City's failure to include an appropriation for annual debt service on certain bonds in its 2011 budget.
3. Another example was Wenatchee, Washington which involved a contingent loan agreement in which the city had made a limited tax pledge to loan funds for interest on notes issued for the Greater Wenatchee Regional Events Public Facilities District. Moody's downgraded Wenatchee's general obligation rating from "A3" to "Ba2" principally due to the city's lack of willingness to avert the default.

Based on the above and our other review, we believe that Moody's would downgrade Rhode Island's general obligation bonds to "Ba1". While we do not know that Moody's would take the same action for a state as it did for the governmental entities above, we see no logical reason why it would not. Ultimately if Moody's views the failure to appropriate funds in situations where there is no legal obligation to pay as an indication that the governmental entity will not meet its legal obligations, the rating impact on the governmental entity should be the same -- whether it is a city, town, village or a state. In looking at the cases above, though Vadenais Heights started out with a higher rating, both Vadenais Heights and Buena Vista ended up with the same rating ("Ba1") following the action that Moody's viewed as evidencing a lack of willingness to pay. We assume the view is that it does not really matter how strong a credit you have, if you are not willing to pay. The credit strength prior to non-appropriation becomes somewhat irrelevant once it is shown that an entity has an unwillingness to pay.

Fitch

It is very difficult to determine what action Fitch would take. We were unable to find any cases where Fitch had rated deals where a governmental entity failed to honor an obligation to pay debt service where such obligation was subject to appropriation. Fitch's criteria states that:

"A decision by a government entity acting as an MO [moral obligation] provider not to honor a well-vetted MO in a timely manner would cause Fitch to discount or disregard that government's MOs in its rating analysis and likely affect Fitch's view of the MO provider's own ratings. Other Fitch-rated credits to which that MO provider has assigned its MO would also be reviewed and may be downgraded, possibly to the levels of the underlying securities, to reflect a weaker view of the MO and its provider."

We spoke with an analyst at Fitch who indicated that as far as he knew Fitch has not dealt with this issue. He did point to one example which we have included in Appendix B related to the city of Manchester, NH but in that case there was neither a legal nor a moral obligation. Nonetheless, Fitch downgraded Manchester from "AAA" to "AA+" because it felt that a "AAA" rated city should still have stepped up and made up the shortfall.

We also found one case, the Town of Cicero, where while Fitch did not rate the Town at the time it failed to appropriate money for a lease, it did rate them a few years later. In 2006, the Fitch report stated that: "The below-average 'BBB' rating, despite generally sound underlying credit characteristics, primarily reflect a decision by the town in 2004 to not appropriate for a lease payment which it had committed to under bonds sold by a conduit issuer." It affirmed this rating again in August 2009, again citing the failure to appropriate and certain other credit factors. Due to recalibration, the "BBB" rating was recalibrated to an "A-" in 2010. In 2011, Fitch withdrew the rating on the Town's debt due to insufficient information, it stated: Given the history of non-appropriation for lease payments, the town's decision to delay implementation of GASB 45 beyond the 2009 deadline and recent results from the state's limited scope audit citing internal control deficiencies, Fitch is concerned about the accuracy of the city's financial information due to the lack of independently audited information."

We are hesitant to conclude too much from this one example, in part, because it is a fairly old case and rating agencies have evolved on this issue. Also, it would be pure conjecture on our part whether in 2004 the rating would have been lower, and the "BBB" would have reflected an increase or whether the rating would have been "BBB".

Due to our uncertainty as to what Fitch would do with its rating on Rhode Island bonds, we have not factored this into our analysis. We do not believe that a significantly higher rating by Fitch would have a significant impact on the way that the state's bonds will trade if the other two rating agencies have significantly lower ratings.

Addressing the Impact of Split Ratings

For the reasons cited above, we believe that both S&P and Moody's would downgrade Rhode Island to non-investment grade: S&P, "B" and Moody's, "Ba1" (although for the Worst case scenario we used "Ba2" given the higher degree of uncertainty as to what Moody's will do). There are various views as to what the impact of split ratings are on how debt will actually trade. Some say to take the higher, some say to take the lower and some say to take the average. One could do an entire report summarizing the many views^{viii}. For purposes of our analysis, we used the average for the Best and Middle cases and lowest for the Worst case scenarios. For below investment grade split ratings, the study cited in the endnote found this to be the approach that best explained actual trading patterns.

How Long Will the Impact Last?

The other question is for how long will the impact last. For the Best Case, we assumed that the impact would only last for as long as the 38 Studios Bonds are outstanding (through fiscal 2021); for the Middle Case, we assumed that the impact would last for two additional years (through fiscal 2023); and for the Worst Case, we assumed that the impact would last through fiscal 2025. We do not have a lot of cases that provide guidance on this point, and so there is not much to guide us. With the exception of Cicero, none of the examples cited in Appendix A have yet to see an upgrade. We hesitate to read too much into Cicero. Moody's downgraded Cicero in 2003 to "Ba2" after the town failed to make payment to the bond trustee and then investors foreclosed on the ice rinks, ultimately selling for approximately a 10% recovery rate in 2005. In 2006, Moody's rated new bonds issued by Cicero, "Baa2" and then appeared to give Cicero an upgrade to "A2" in 2010. Fitch, in contrast, maintained its rating on Cicero's general obligation bonds (ignoring a broader recalibration of municipal credits) from 2006 until 2011 (when it withdrew its rating). Fitch had not rated Cicero in 2003 but took the missed payment into account in rating Cicero in 2006.

There is one example in Appendix B where there was an upgrade but only after the bonds were paid in full. Spokane, Washington was downgraded by S&P to "BBB" in 2001 after a required sinking fund installment was missed on bonds issued by the Spokane Downtown Foundation. This rating was affirmed a little bit more than 2 years later with S&P citing its on-going concern about Spokane's willingness to honor its debt. Spokane was upgraded in 2004 shortly after it issued refunding bonds and paid the holders of the refunded bonds in full.

We started with the assumption that if the General Assembly makes the decision to not make the appropriation this year, then it will make the same decision each year for as long as the 38 Studios Bonds are outstanding. This may or may not be the case, but if the state is going to ultimately decide to make the payment on the 38 Studios Bonds, it is much better to make the appropriation this year and for subsequent years. As seen with Spokane, it suffered many of the economic consequences described in this report, including a rating downgrade, but then ultimately paid the bondholders in full. If the General Assembly ultimately make the payment but in the interim pay the price of higher interest rates, the General Assembly might as well have simply made the payment in the first place.

Once we assumed that the General Assembly chooses not to pay each year, we concluded that the rating agencies would at a minimum keep the rating down at least until the maturity date of the 38 Studios Bonds. This is in part because each year the request for an appropriation will be made, and presumably each year the General Assembly again determines not to make the appropriation. This will be annual, continued evidence to the rating agencies of the state's unwillingness to honor its obligations. The impact will in all likelihood continue after that point, and what has happened since the default happened. In our discussions with S&P, it indicated that there are no hard and fast rules. What was the ultimate resolution? Were the bondholders ultimately made whole? Were there management changes making payment more likely in future? What policy changes have been made to ensure it does not happen again?

COST IMPACT OF RATING CHANGES

Increase in Credit Spreads

As a result of ratings downgrades, the interest rate on the state's debt would increase relative to market rates. That is, the state's "credit spreads" would increase because the market would view the state as having a higher risk of default on all of its debt. The most significant direct cost to the state would come from increased interest rates on future debt issuance, as described below. Other areas of impact are described in the next section, Other Negative Consequences of Non-Appropriation.

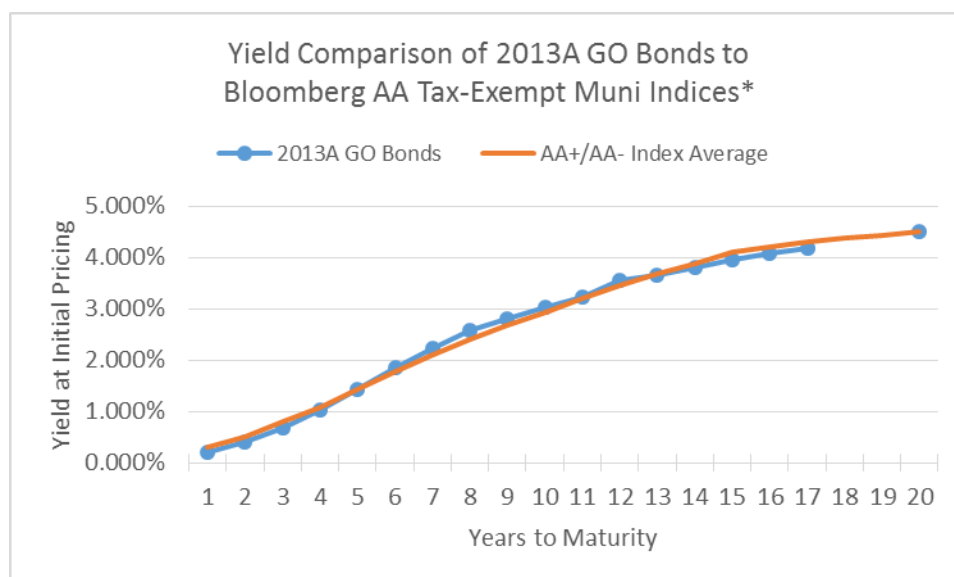
In order to assess the degree to which credit spreads would increase, we need to know how much more yield investors demand to take on the added risk of owning "BB" rated or "B" rated bonds versus "AA" rated bonds. Namely, these are the "AA" to "BB" credit spreads and "AA" to "B" credit spreads. We studied indices and other market data to compare bond yields across ratings categories over time. Based on our analysis, it is estimated that the overall yield increase (the incremental credit spread) the state would experience for amortizing fixed rate bonds would likely be about 2% to 3%, depending on factors such as type of debt, final maturity, amortization, and market conditions. Considering that rates and credit spreads change over time and therefore factoring in historical volatility, the range is potentially much wider. Through our analysis we developed a range with a 95% confidence interval of 1.45% to 4.30%. While we believe the 2-3% range is more likely, especially when considering an average over all expected future bond financings in our time horizon, there are examples in our case list where spread increases were closer to the extremes predicted by our model.

Use of Indices. We analyzed historical data from Bloomberg indices for tax-exempt municipal GO bonds, tax-exempt municipal revenue bonds, and taxable municipal bonds. The taxable municipal bond index includes both GO and revenue bonds. Each of these indices is available for various credit ratings, ranging from "AAA" to "BBB" and data is available for various maturities across the yield curve (interest rates generally are higher for later maturities, as are credit spreads). The municipal index curves are populated with US municipal bonds of the type indicated by the index name (GO, revenue, taxable) with an average rating as specified by the index name ("AAA", "AA+", etc.) from S&P and Moody's. Bloomberg does not have an index for "BB" or "B" category tax-exempt municipal bonds, and we were unable to find one from another source specific enough for our modeling (maturity and rating specific), so we turned to Bloomberg's corporate bond indices for these spreads. See Table 5 for a list of indices used. Each is populated with USD denominated senior unsecured fixed rate bonds issued by domestic companies with composite ratings in the category covered by the index.

Table 5 – List of Indices Used

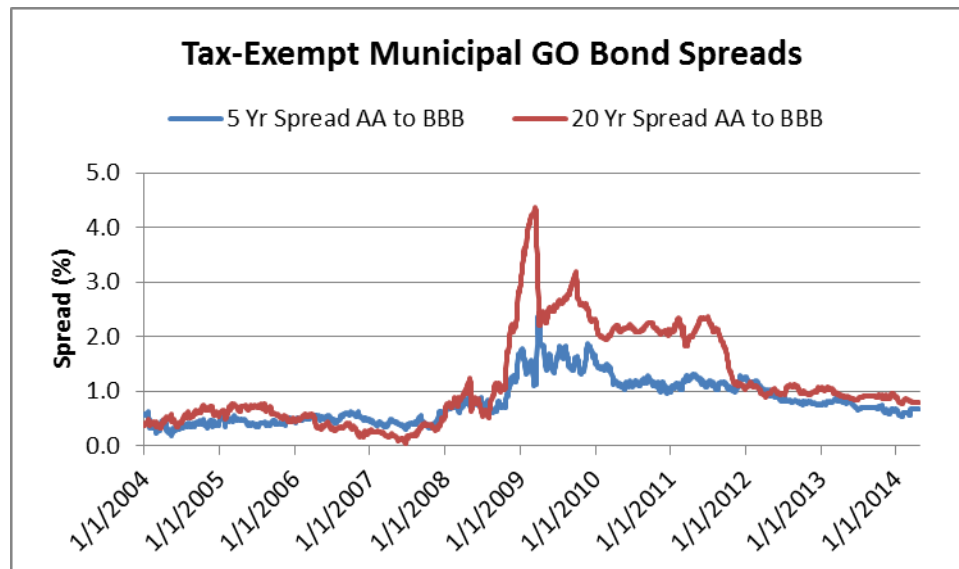
Index Name	Curve ID
US Muni General Obligation AAA Curve	M49
US Muni General Obligation AA+ Curve	M45
US Muni General Obligation AA- Curve	M104
US Muni General Obligation A+ Curve	M163
US Muni General Obligation A- Curve	M159
US Muni General Obligation BBB Curve	M631
US Muni General Purpose AAA Curve	M81
US Muni General Purpose AA+ Curve	M484
US Muni General Purpose A- Curve	M486
US Muni General Purpose BBB Curve	M635
US Muni Taxable AAA Curve	M901
US Muni Taxable AA Curve	M903
US Muni Taxable A Curve	M904
US Muni Taxable BBB Curve	M906
USD US Composite AA BVAL Curve	BS73
USD US Composite A BVAL Curve	BS74
USD US Composite BBB BVAL Curve	BS75
USD US Composite BB BVAL Curve	BS193
USD US Composite B BVAL Curve	BS195

Establishing a Baseline. As a starting point in our analysis, we looked at how well the AA Muni GO indices matched with the yields of recently issued Rhode Island GO bonds. First we averaged the “AA+” and “AA-” indices, and then we compared our composite to four recent state GO offerings. On average the spread between the index and the Rhode Island bonds was less than 2 basis points across the yield curve. The chart below illustrates this for the state’s 2013A GO Bonds.



*Note: we averaged the AA+ and AA- to form the AA composite shown in the chart.

Considering the Time Horizon and Historic Data Set. Once we established a basis of reasonableness for using these indices, we looked at the spreads between various credit categories and then focused on the spreads between our “AA” composite index (average of Bloomberg “AA+” and “AA-”) and the “BBB” Muni GO Index. Spreads vary by maturity and over time, so we looked at several historical periods to account for this variation in our modelling. This concept can be visualized by looking at the variation in the plots of “AA” to “BBB” MUNI GO spreads for the 5-year and 20-year maturities over time and compared to each other.



The market prices credit risk differently as market conditions change. A clear example of this occurred during the recent national financial crisis beginning in 2008. The widespread flight to quality caused these spreads to increase dramatically, as evidenced by the spike in the above chart. The ten year time horizon includes times of very low and very high credit spreads. Since the time horizon for future bond issuance extends forward for many years, it is appropriate to use a long historical look back period that covers varying market conditions. We believe that the ten year period used in our analysis is appropriate. Though the past is not necessarily a predictor of the future, it does help us account for and model for the variation we have experienced.

The Corporate Index data was only available back to 9/10/2013, so for determining a range of spreads from triple B to double and single B, we were limited to using this shorter historic data set. While ideally we would have had 10-years of the Corporate Index data (or even more ideally for double and single B category municipal GO indices), we believe this is a rational approach. In all likelihood the spread volatility would have been greater for the lower rated categories over the ten year horizon. The use of the shorter historic period of “BB” and B category Corporate Index data reduces the chance of overstating the probable range of spreads.

Detailed Approach to Analysis. We then applied the following approach to estimate “AA” to “BB” and “AA” to “B” GO spreads:

1. For “AA” to “BBB” Muni GO spreads, calculated the average and standard deviation for each maturity over the ten year historical period from 4/25/2004 through 4/25/2014. Then determined the average plus or minus 1.96 standard deviations. Note: to correct for skew, the natural log of the spreads was used to determine the average and standard deviation.
2. Repeated the same for “BBB” to “BB” and “BB” to “B” corporate bond spreads using the 9/10/2013 to 4/25/2013 historic period.
3. Calculated ratios of the tax-exempt GO rates to the taxable corporate rates for “AA”, “A”, and “BBB” ratings at each maturity. The average across these categories and weighted by maturity was 89%. To be conservative in our estimate of spreads, we reduced this multiplier to 86%. This factor was used to convert the taxable spreads found in step 2 to a tax-exempt equivalent.
4. The “AA” to “BB” and “AA” to “B” spreads were determined by adding the components from steps 1 and 3. Results for notched ratings were interpolated and extrapolated from the category midpoints. Results for each maturity were weighted to reflect the weight that maturity’s yield would have in determining the overall yield of a 19 year serial GO bond and separately for a 10 year certificate of participation. Assumed level debt service for amortization, based on representative amortization schedules from the state’s capital plan.

The resulting spreads, used in the next step of our analysis, are shown below. We assumed the same spread increases would apply to non-GO debt. Credit spreads tend to be narrowest for GO debt and wider for revenue bonds and other non-GO debt, so this assumption would likely understate the impact on the cost of future COPs.

Table 6 – Estimated Impact on Credit Spreads

Estimated Yield Increase (Spread from AA Yield)						
Spread To	19 Year GO Bond			10 Year COP		
	Average	-1.96 SD	+1.96 SD	Average	-1.96 SD	+1.96 SD
BB+/Ba1	1.68%	1.06%	3.24%	1.67%	1.04%	3.10%
BB/Ba2	1.90%	1.28%	3.45%	1.88%	1.25%	3.31%
BB-/Ba3	2.13%	1.49%	3.66%	2.08%	1.45%	3.51%
B+/B1	2.35%	1.71%	3.88%	2.29%	1.66%	3.72%
B/B2	2.58%	1.93%	4.09%	2.50%	1.87%	3.93%
B-/B3	2.80%	2.15%	4.31%	2.70%	2.08%	4.13%
Scenario	Middle	Best	Worst	Middle	Best	Worst

Sensitivity Analysis. Given the nature of a non-appropriation event, it is highly likely that volatility would increase for yields on the state’s debt, and therefore considering a wide range of outcomes is critical. Using the average plus and minus 1.96 standard deviations represents a 95% confidence interval - based on the data set we have, we expect that 95% of the future cases would fall into this range. The sensitivity analysis considers a wide spectrum of possible outcomes. The Best Case assumes yields would be 1.96 standard deviations below the mean or average, the Worst case 1.96 standard deviations above the mean, and the Middle Case assumes the average increase would occur. The Best and Middle Cases assume that investors would consider the average of the two ratings and price accordingly, while the Worst Case assumes that investors focus on the lower rating. We view the Best and Worst Cases as

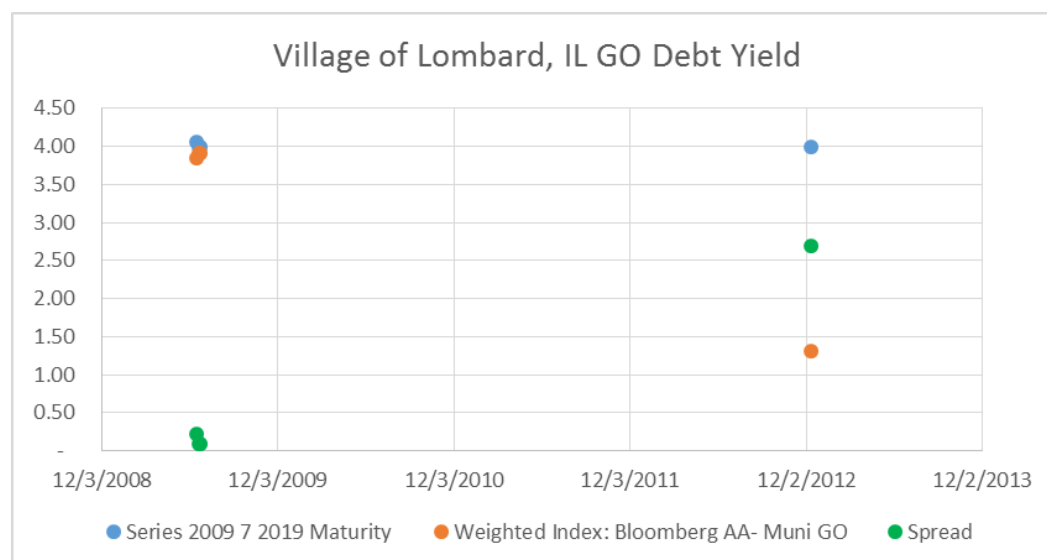
fairly extreme and therefore unlikely. They are included though to provide a sense for how much uncertainty is created by variation in the markets. The Middle Case is more likely.

These ratings and associated spread increases will be applied to planned future debt issuance, covered in the section below entitled Future Debt Issuance, to determine the cost impact.

Sample Spreads from Some of the Cases in Exhibit A. While we did not feel that there was enough trade data for the cases in Exhibit A to use for purposes of deriving our estimate for the impact on credit spread, we did look at some of the cases to further test our analysis.

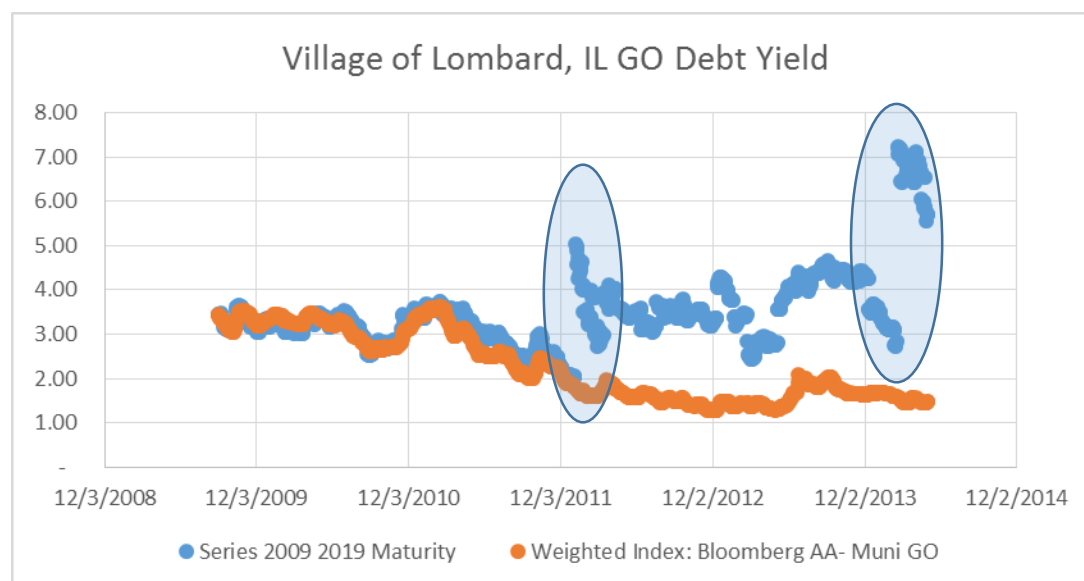
We used the trade data available through Bloomberg and on Electronic Municipal Market Access (“EMMA”) website, which is a service of the Municipal Securities Rulemaking Board. Both services provide prices and yields at which bonds and notes are bought and sold, for most trades occurring on or after January 31, 2005. Since prices and yields vary over time for reasons related to the individual credit (e.g. a change in bond rating) but also due to economic reasons (higher interest rates in general), it is not very informative to just look at the change over time on a particular bond (e.g. the yield on the 2020 maturity of one particular bond went up from 3% to 5%). Instead, using scatter charts, we plotted the yield over time of the target bond in blue, the most appropriate Bloomberg index (based on type of bond, initial rating of the bond, and the time to maturity at the time of the trade) corresponding in time with the bond trade in orange, and the associated spread in green. In order to clearly see how yields are changing with respect to an index, one needs to look at a separate scatter chart for each maturity of each bond issue being analyzed.

What follows are a few scatter charts for different maturities of a few of the cases listed on Exhibit A. We selected the longer maturities since the longer end of the curve is typically flatter and therefore is less sensitive to small changes in the maturity compared to shorter maturities. Notice that on the left side of these scatter charts, before the city or town failed to appropriate funds for debt service, the blue and the orange dots are clustered fairly close together. Now, notice that on the right side of these scatter charts, after the city or town failed to appropriate funds, the blue and orange dots are fairly far apart. The difference between these dots on average shows the impact that appears to be attributable to the failure to appropriate.

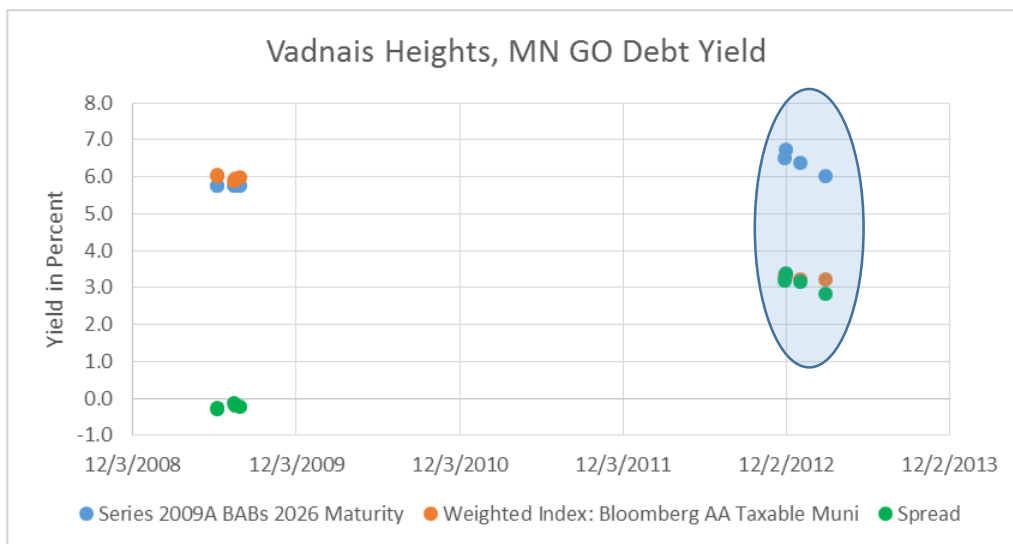
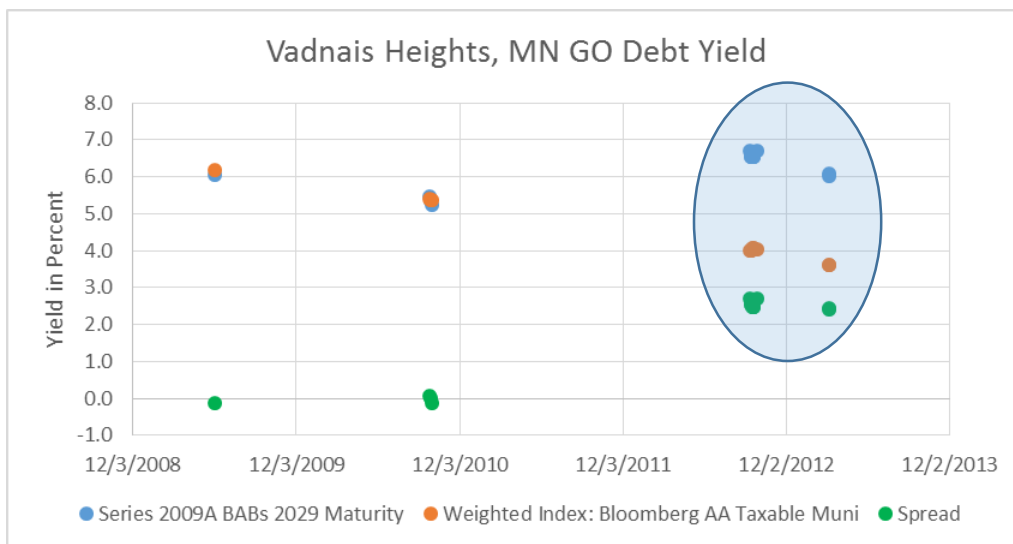
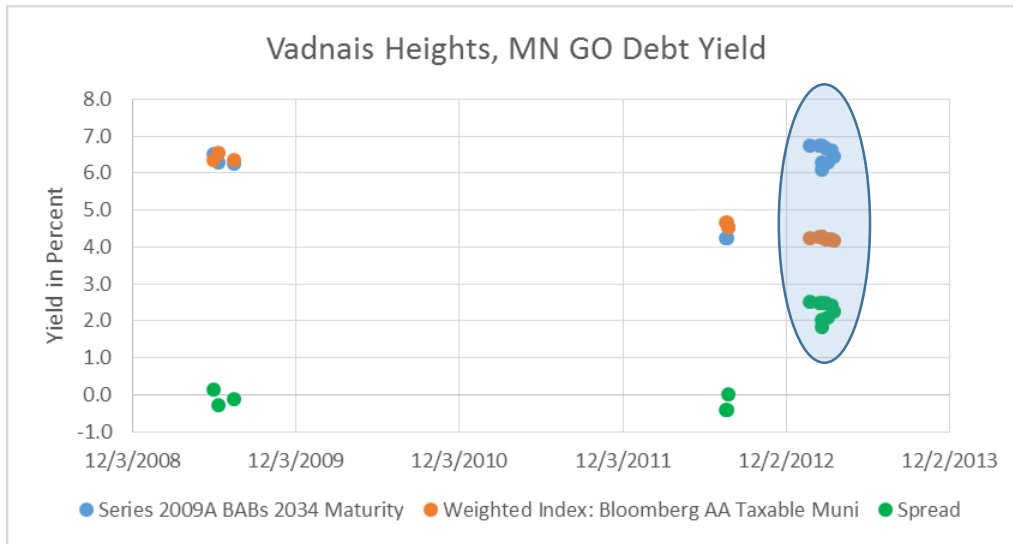


The above chart shows EMMA trading data for the July 1, 2019 maturity of the Village of Lombard, General Obligation Debt Certificates, Series 2009 bonds. The bonds were originally rated “AA” by S&P in 2009. On 12/2/2010 S&P downgraded the debt to AA- and then to BBB- on 1/5/2012. The latest downgrade to B- occurred on 2/11/2014. The AA- Municipal GO index is plotted in orange on the same trade dates. The spread widened from an average of 0.14% bps to 2.69%, an increase of 2.55% during the time that the bonds were rated BBB-. This single data point is helpful, but is not sufficient to make a robust predictive model.

This particular bond maturity also had additional data from multiple sources available through Bloomberg. See the chart below with the more robust data set. This chart becomes difficult to read when the spread is added to the chart, so it is not shown. The spread averaged 0.13% initially, then jumped to 2.05%, and then in January 2014 to 5.16%. The jumps in spread correspond closely with the change in rating status, and are highlighted by the blue ovals. While better than the single data point in the previous chart, relying on a few examples like this one may have biased the model, which again reiterates why we used the index approach to determining an appropriate range of spreads. As it turns out, the spreads for this particular CUSIP appear to have widened even further than our Worst Case.



Turning now to the Vadnais Heights case study, the next three charts below show the yields associated with the trading activity of the 2034, 2029, and 2026 maturities of the Vadnais Heights Series 2009A Taxable GO Bonds in blue, the weighted average maturity of the Bloomberg “AA” Taxable Muni Index that corresponds to the time remaining to maturity of the bonds being analyzed in orange, and the spread between them in green. The bonds were originally trading in line with the index as evidenced by the proximity of the blue and orange dots to each other and corresponding green dots near zero on the left side of the chart. To the far right, the spread increases dramatically after the bonds were downgraded to “B” by S&P in August of 2012. Spreads increased on average by 2.46%, 2.59%, and 3.36% for the 2034, 2029, and 2026 maturities respectively. The spreads for the 2034 and 2029 maturities are in line with our Middle Case, and the spreads of the 2026 maturity are in between our Middle and Worst Cases.



Future Debt Issuance

While market access may be unavailable for certain types of debt, primarily moral obligation debt, the assumption is that the state would be able to issue GO debt and COPS, but at the much higher spreads associated with “B” or “BB” category ratings, as described in the previous section. We made several assumptions regarding the amount of debt that will be issued in future years. As our starting point we assumed the state will issue at levels represented in the Governor's Fiscal Year 2015 Capital Budget and FY 2015 – FY 2019 Capital Improvement Plan. We then added and subtracted as follows:

- Reduced FY 2015 COPS issuance by \$19.5 million compared to plan, assuming it would be issued in FY 2014.
- Increased COPS issuance by \$20 million in fiscal years 2018 and 2019. The plan shows \$0 for those years, but on average the state has issued about \$25 million per year. We used \$20 million, as a more likely (than \$0) yet conservative projection (compared to the \$25 million five year average).
- For years after FY 2019, we based the issuance assumptions on conversations with staff in the state's Department of Administration and averages over the recent past and 5 Year Capital Plan. See Table 7 – Expected Future Debt Issuance by Type.
- We assumed that any debt that was expected to be issued in fiscal year 2014 was in fact issued in FY 2014 (or will be). We understand that the expected deals have been done, or are very close to completion with the one exception being the \$75 million Historic Structures Tax Credit Fund. If in fact this financing cannot be accomplished in FY 2014, the incremental additional present value cost, if the state does not appropriate funds for the 38 Studios Bonds, would be in the range of \$5.4 million to \$13.6 million using the same assumptions in terms of incremental credit spreads as described above.

Table 7 – Expected Future Debt Issuance by Type

Type/Purpose of Debt	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021 and beyond
GO*	\$60,125,000	\$114,875,000	\$106,800,000	\$112,700,000	\$130,700,000	\$80,000,000	\$80,000,000
IT COPS		5,000,000					
New IT COPS	10,000,000	10,000,000	10,000,000				
Virks COPS	6,000,000	7,000,000					
Historic Structures		75,000,000		52,000,000			
Future COPS**				20,000,000	20,000,000	20,000,000	20,000,000
Total Appropriation Debt	\$16,000,000	\$97,000,000	\$10,000,000	\$72,000,000	\$20,000,000	\$20,000,000	\$20,000,000

*GO Issuance per Capital Plan with \$80 million per year estimated after 2019.

**COPS and other appropriation debt per Capital Plan less \$19.5 million of FY 2015 projects issued in FY 2014 with \$20 million per year added starting in FY 2018.

Table 8 outlines the key assumptions used in our model, along with our conclusions with respect to the incremental amount the state would pay in debt service as a result of the decrease in bond ratings. Our key assumptions are described in more detail above under the headings “How Long Will the Impact

Last?,” “Likely Impact on Ratings,” “Addressing the Impact of Split Ratings,” “Increase in Credit Spreads,” and “Future Debt Issuance.” For example, the Middle Case assumes the following:

- Ratings will be downgraded in the summer/fall of FY 2015 (calendar year 2014) to
 - “B” (middle of the single B category) for GO bonds and to “B-” for appropriation debt by S&P
 - “Ba1” (high end of the double B category) for GO bonds and to “Ba2” for appropriation debt by Moody’s
 - For the Middle Case we assumed the average of the two ratings would determine the credit spreads (3rd bullet).
- Ratings will remain at this level for 9 years, until FY 2023, two years after the final debt service payment is due on the 38 Studios Bonds.
- The incremental credit spread to be paid by the state due to the non-appropriation and resulting ratings downgrade will be 2.13%, in the case of GO bonds and 2.29%, in the case of appropriation debt.
- The state will pay this incremental credit spread on all debt issued over the 9 years (per the Middle Case) following the downgrade:
 - All debt included in the capital plan for 2015-2019 except for \$19.5 million of COPs which are expected to be issued this year,
 - plus an additional \$80 million of GO Bonds for each year after FY 2019,
 - and an additional \$20 million of COPs or other appropriation debt for each year after FY 2017.

At the bottom of the table, there are four summary lines that show the results of the model. The first looks at the incremental cost of issuing debt due to the increased credit spreads assuming that that debt remains outstanding until the first optional call date. This assumes that the state’s ratings will have recovered by the time the bonds are callable and that the state will be able to refund them at interest rates that do not include the increased credit spreads. In the Middle Case, this results in an incremental cost to the state of \$188.3 million. The second line shows the present value (using a 5% rate to discount the projected debt service) of the incremental cost through the first optional call date, and in the Middle Case, is \$125.4 million. The third line shows the incremental cost of issuing the debt due to the increased credit spreads assuming that the debt remains outstanding until maturity. In the Middle Case, this results in an incremental cost to the state of \$246.9 million. The fourth line shows the present value for this of \$150.5 million.

It is worth noting that incremental costs modelled to the Call Date assume a sudden return to normalcy after 9 years (Middle Case). It may be that the state’s ratings recover more gradually rather than a step change back to “AA”. The incremental costs during such a transition period have not been modelled other than that we have assumed no bonds would be advance refunded (in other words, that the bonds would not be refunded before the 10-year standard call period). If a ramp up had been modelled, the costs would be higher and would depend on the time it took to recover the “AA” rating. In some ways the line in the table entitled Incremental Costs Through Final Maturity may more closely approximate this concept. The last bonds issued just prior to the ramp to recovery might have opportunities for advance refunding or certainly to be called at the first optional call date. At the same time the first bonds issued after a ramp to recovery (i.e. in the Middle Case, the bonds issued after the 9 year period)

would have lower spreads than the previous bonds but still much higher than bonds issued with an “AA” rating. These two factors would offset to each other to some degree.

Because we do not model the notion of a gradual recovery, we believe our approach understates the likely costs that would be incurred, and that the higher costs associated with modelling these assumptions to final maturity of the bonds issued during the affected period may more closely represent the outcome.

Table 8 - Scenario Analysis Considering Ratings, Yield Impact, and Future Debt Issuance

Key Model Parameters	Scenarios		
	Best	Middle	Worst
Ratings Downgrade/Upgrade Timing			
Initial Downgrade timing	Summer/Fall 2014 (FY 15)		
Duration of Downgrade (years)	7	9	11
State GO Credit Ratings			
S&P	B	B	B
Moody's	Ba1	Ba1	Ba2
Combined Rating	BB-/Ba3	BB-/Ba3	B/B2
State Appropriation Debt Rating			
S&P	B-	B-	B-
Moody's	Ba2	Ba2	Ba3
Combined Rating	B+/B1	B+/B1	B-/B3
Incremental Credit Spread			
GO Bonds	1.49%	2.13%	4.09%
COPS/Appropriation Debt	1.66%	2.29%	4.13%
Future Annual Debt Issuance			
In addition to adjusted Capital Plan			
GO Bonds after FY 2019	\$80,000,000	\$80,000,000	\$80,000,000
COPS/Appropriation Debt starting FY 2018	\$20,000,000	\$20,000,000	\$20,000,000
Incremental Cost to the Call Date			
of Bonds Issued with Higher Yields	\$109,085,595	\$188,260,260	\$420,729,266
PV @ 5%	\$75,437,581	\$125,377,549	\$269,321,588
Incremental Cost Through Final Maturity			
of Bonds Issued with Higher Yields	\$142,856,050	\$246,933,320	\$553,338,978
PV @ 5%	\$90,395,813	\$150,470,573	\$323,955,244

Additional Issues

This analysis assumes that all debt in a single rating category trades the same. In fact, one single A credit may not trade the same as another single A credit. This is harder to project in a situation like this and so we have not taken this factor into account. One study that did look at this related to Illinois and tried to look back and see what the reputational impact of all of Illinois troubles had on the way its bonds traded versus California which had the same rating. The authors concluded that the state of Illinois also appears to have paid a "reputation risk premium" due to the state's overall reputation resulting in the state paying approximately 7 to 21 basis points higher yields than the state of California, even though both states had the same rating.^{ix} There is no way to know if Rhode Island will have to pay a reputational premium as compared to other similarly rated credits, but it is possible that it will.

In the world after a default on the 38 Studios Bonds, some investors might believe that the state will make good on all of its other obligations, and view Rhode Island's credit to be significantly stronger than the "Ba1" and "B" ratings we expect will be assigned by the rating agencies. There would still be an impact on rate because certain buyers cannot buy, or can only buy a limited amount, of bonds with lower ratings. This varies by investor based on investor policy; many investors are limited to high grade or investment grade bonds (Rhode Island's bonds are currently eligible to these investors by virtue of the AA/Aa2 ratings) but the anticipated downgrade would eliminate these investors' ability to buy Rhode Island debt. Certain individual investors will not buy bonds below a certain rating and investment advisors will not typically recommend lower rated bonds to smaller, less sophisticated investors – so that there will be less of a market for the bonds. According to media reports, UBS is currently being sued for selling Puerto Rico bonds to less sophisticated investors. Also, many mutual funds limit their bond purchases to investment grade credits leaving a smaller pool of purchasers.

OTHER NEGATIVE CONSEQUENCES OF NON-APPROPRIATION

In addition to the negative impact felt by the state in terms of additional interest paid on future borrowings which is shown above, there are also a number of other negative consequences of non-appropriation. We describe these below. Where we felt that we could reasonably quantify the effect, we have included those amounts. In other instances, we did not feel as if it was possible to quantify the risk, but we would caution you that these consequences may still be significant.

Impact on existing debt

One potential impact of non-payment on moral obligation debt or a significant reduction in ratings might be that it could trigger a default on debt of the state or state agencies. While we did not review all of the related documents, we did identify at least one bond issue that will go into default if the state fails to maintain ratings of A- by S&P or A3 by Moody's. Were this to happen, the holder of the Rhode Island Economic Development Corporation Economic Development Revenue Bonds (I-195 Redevelopment District Project - Series 2013 A) in the original par amount of \$37,440,000 and the Economic Development Revenue Bonds (I-195 Redevelopment District Project - Series 2013 B) in the original par amount of \$960,000 could accelerate the bonds and require RICC to pay back both principal, interest and a LIBOR breakage fee. The rate on the bonds also increases upon an event of default at the option of the holder to a rate of 4% plus the prime lending rate, but not in excess of the applicable

maximum interest rate. These I-195 bonds are also moral obligations so that if the bonds are accelerated and RICC is called upon to pay back the bonds, the state could again be faced with the question as to whether it should honor the moral obligation. Would the General Assembly honor this moral obligation or would members of the General Assembly refuse to approve the appropriation because, for example, they felt it was unfair for the creditor bank to accelerate the bonds? We only raise this to point out that it can become a slippery slope once one decides not to honor one moral obligation.

Assuming the holder does not accelerate the bonds, the state would pay the Default Rate of 7.25%, given the current prime lending rate of 3.25%. This is about a 6 percentage point increase over the current rate of about 1.15% for the Series A bonds and of about 1.30% for the Series B bonds. If the current rate environment holds steady, the incremental cost over the remaining term of the bonds, through 10/1/2022, would be about \$18.8 million with a present value of about \$15.0 million. Refinancing these bonds into fixed rate publicly offered debt would be challenging. Moral obligation bonds, would likely be rated no higher than B-/Ba2; market access would be difficult or costly, and there would potentially be no buyers.

Impact on Refunding Opportunities

The state generally issues 20 year (approximately) GO bonds with a 10-year call. At the 10-year point bonds can be refunded for a savings if market conditions are favorable (rates low). In fact, the state has regularly refunded bonds as market opportunities arise. The Series 2014A bonds were recently issued, which refunded the 2004A, 2005C, 2005E, 2006B, 2006C, and 2007A bonds with a total par amount refunded of about \$84 million, which achieved a total PV savings of about \$4.1 million. Assuming no ratings downgrades and continued low market rates, refunding opportunities will be available for other outstanding bonds. Refunding savings on the callable maturities of outstanding bonds, assuming 3% of refunded debt service as the savings target, would provide a present value savings of about \$8 million. The state typically achieves a higher savings percentage, so this is a conservative estimate in that sense. On the other hand, it assumes all callable maturities are refunded for a savings on the call date. To the extent market conditions (high rates) delay any refunding deals, the savings would decrease. We feel that these two factors balance each other off. This potential opportunity to refund outstanding bonds for savings would likely be eliminated because the interest rates on any refunding bonds would be too high as a result of the downgrades described above.

Impact on Debt Issuance by Other Rhode Island Issuers

We would expect to see other issuers in Rhode Island also be adversely impacted when they go to market. While this impact may be small, it will in any event increase borrowing costs for other issuers, such as cities and towns, in the state. In Michigan for example, certain local governments have apparently faced a significant market penalty as a result of Detroit's bankruptcy.^x One area that will account for a lot of the future debt is school building construction. According to the Director of Finance at the Rhode Island Department of Elementary and Secondary Education, the pipeline of these deals is approximately \$300 million. While these bonds are issued without the general or moral obligation of the state, the cities and towns depend on the fact that the state will appropriate state aid for their budgets and to pay a portion of their debt service on their debt incurred for school buildings (pursuant to the Housing Aid Program). But even on entities where there is no credit link, there might be a link -- simply because "Rhode Island" is in the name of the bonds. One example of this would be bond issues by the

Rhode Island Health and Educational Building Corporation, which does bond issues for non-profits such as Brown University and Roger Williams University. A rough, but simple, metric to gauge the impact would be to estimate the present value of one basis point for this related debt, as equal to \$100,000 per \$100 million of debt issued. This assumes an average life of about 15 years, which is a reasonable approximation for this type of debt. Various anecdotes about Detroit and other troubled issuers puts the impact at about 10 basis points. Using our metric on \$300 million of debt in the pipeline implies added costs to these borrowers (if their interest rate turned out to be 10 basis points higher) of \$3 million. Assuming this is an annual issuance number, the cost would be incurred annually depending on new issuance for the year.

Impact on Rhode Island Residents Who Own Rhode Island Bonds

The downgrade in the state's credit rating will impact the market value of all of its outstanding bonds and other bonds supported by the state by either its moral obligation or other commitment to appropriate funds. In addition, as noted above, this may very well affect the outstanding bonds of all Rhode Island issuers. While this does not directly affect the state, it will negatively affect any Rhode Island residents who own Rhode Island bonds either directly or through a mutual fund.

There is approximately \$1.8 billion of outstanding debt that is issued by Rhode Island or that is supported by the state's moral obligation or appropriation pledge. Assuming that purchasers of these bonds would require an increase in yield of 2.13% to compensate them for the perceived additional risk (based on our Middle Case), then the market value of these bonds would decrease by about \$212 million to \$255 million. While we did not calculate the exact average maturity of the bonds outstanding, we did a rough calculation and believe it is between 7 and 9 years, which leads to the stated range of decrease in value. It is more difficult to know what percentage of the state's bonds are owned by Rhode Island residents but based on information from one of the state's underwriters – which is admittedly just a rough estimate – we assumed that 35% of the outstanding bonds are held directly or indirectly by Rhode Island residents. This would translate to a loss to Rhode Island residents of about \$75 – 90 million in the market value of their holdings.

Other Reputational Impacts

The state has done a lot to try and improve its reputation over the past several years. In the area of bonds, Rhode Island is often cited favorably as a state that took strong action in response to the bankruptcy by Central Falls. Rhode Island reportedly has one of the strongest statutes to protect investors. The state has a lot of tools at its disposal, including the ability to appoint an overseer, create a budget restructuring commission or appoint a receiver with significant powers. In addition, general obligation bondholders were statutorily granted a first lien on city revenues. A report by the Pew Charitable Trusts entitled "The State Role in Local Government Financial Distress" credited the state's actions as a reason for Central Falls' exit from bankruptcy "after only 13 months, the shortest of several recent, high-profile municipal bankruptcies."

It seems clear to us that the failure to appropriate funds, combined with the likely step declines in ratings, will harm the reputation of the state and will undermine much of the positive work that has been done. This issue has already garnered a lot of negative press for Rhode Island, and were the General Assembly to elect not to appropriate the funds, we would expect that this negative press will only exacerbate. The impact of this is admittedly a hard thing to measure but cannot be ignored.

As businesses decide where to relocate, or where to expand, a state's reputation is bound to factor into that equation. The ripple effect from each business who elects to relocate elsewhere or to expand elsewhere is significant to the state, not only in terms of tax dollars from the business, but also in terms of the jobs for residents.

There may well be a similar impact on residents as they decide whether to stay in Rhode Island or seek better opportunities elsewhere, or on non-residents deciding whether to move to the state.

We would expect that a default by Rhode Island will negatively impact the ability of other states to use their moral obligation to reduce the interest rate on their bonds. If Rhode Island was willing to walk away, why wouldn't another state? It will call into question the current assumption that although moral obligations are not legal obligations, that in fact they will be honored. If this does in fact happen, many will not be happy that it was Rhode Island that changed the status quo.

Also, non-residents who lose market value on their bonds because of the default will also have a less favorable view of the state. Bondholders who just recently purchased bonds of the state may very well look for opportunities to sue the state for the loss of market value so soon after purchasing their obligations.

Impact on Available Tools for Business Development

If the market determines that the state's willingness to appropriate for the 38 Studios Bonds is not an anomaly but rather a strong indication of the state's unwillingness to honor its moral obligation (particularly given the prior failure mentioned above), the market may very well not accept the moral obligation of the state (in other words, even if it was given, the market would not give it any weight in determining whether or not to invest). This would mean that the state would have one less tool to use in trying to attract businesses to relocate to the state. This tool, for example, appears to have been successfully used in the case of Fidelity.

Fewer Options for How Debt is Issued

The non-investment grade rating will also affect which banks are willing to lend to the state, and on what terms. As seen in the legal documents executed in connection with the I-195 initiative discussed above, it is not unusual for banks to have rating triggers in their deals, both in terms of requiring a higher interest rate for downgrade and in terms of triggering an event of default at certain levels. Banks may very well be unwilling to do an unsecured deal, especially where it is relying on a moral obligation or another obligation that is subject to appropriation.

Final Thought

One option in situations like this is to consider going back to the bondholders or the bond insurer and try and negotiate a deal where you would pay part but not all of the debt, or extend the debt schedule. Even if the bond insurer (the likely party in this case) were to agree, we believe that the rating agencies would see this as a coerced deal and still downgrade the state for its unwillingness to pay its obligations. One example of this occurred in Vadnais Heights, Minnesota. The Vadnais Heights Economic Development Authority tried to do a tender offer for bonds when the sports complex it financed failed to generate sufficient revenues. S&P stated that this was "[t]antamount to default" since it was done in a distressed situation.

ADDRESSING SOME OF THE REASONS CITED TO NOT APPROPRIATE FUNDS

We know that some people do not want to appropriate funds because they feel the state never should have put its moral obligation on the 38 Studios Bonds in the first place. Based on our findings, regardless of whether or not it was a bad deal, it would not affect the result. It will cost the state significantly more to not appropriate funds for all the reasons expressed in our report.

Others point to the fact that the investors must have understood both the project and appropriation risks because of the high interest rate on the 38 Studios Bonds, and therefore feel that there is no need to appropriate funds. While we acknowledge that the rates on the 38 Studios Bonds seem quite high (especially for bonds rated AA+ by S&P and Aa3 by Moody's due to the insurance policy by Assured Guaranty), it does not change our conclusions. The time to negotiate rates is before the deal is done. If the rates were unacceptable, the bonds should not have been sold. All parties agreed to the transaction at the time of closing, so that is the deal that was reached. The state will still be downgraded for lacking the willingness to pay debt, and it will still incur all the negative consequences that flow from that downgrade. Determining the appropriateness of the rates is a separate issue.

Another argument is that the 38 Studios Bonds are insured and so, if the state fails to appropriate funds, the bondholders will still be paid. Isn't that the whole purpose behind buying insurance? As discussed above, insurance was purchased with proceeds of the 38 Studios Bonds to provide insurance to the holders of the 38 Studios Bonds in the event that 38 Studios and the state did not pay. It was not purchased for the benefit of the state. In any event, the rating agencies will still downgrade the state for lacking the willingness to pay debt whether or not the bond insurer pays the bondholders.

One more reason given is that this is a moral obligation and not a legal obligation. That is true, but because the rating agencies believe that not appropriating funds to honor a moral obligation is a strong indication that an entity does not have a willingness to pay other types of debt as well, including general obligation debt, the rating agencies will still downgrade the state's bond rating and the state will still suffer the additional costs as a result. In some respects the difference between moral obligations and legal obligations is a matter of the process followed. Both processes are legitimate. The end result in both cases is a promise by the state to pay, and the market for both types of bonds has grown because both moral and legal obligation bonds have been repaid.

Another reason given to not appropriate the funds for debt service on the 38 Studios Bonds is that the state could use the funds more beneficially on other projects. Our conclusion is that not making the appropriation will actually cost the state significantly more than appropriating the funds for debt service.

Finally, some point to other entities that have chosen not to make debt payments in similar circumstances. While we could not find any other states that had failed to honor a moral obligation, it is true that we found some cases where other entities chose not to appropriate money even though they had the ability to pay. Nonetheless, like virtually all of those entities, we expect that the election not to honor the moral obligation will result in a significant downgrade on the state's ratings and will trigger the negative consequences described in this report. We would also point out that in general ratings did not recover until the defaulted bonds were paid.

SUMMARY

The state put its moral obligation on the 38 Studios Bonds. In retrospect, this was clearly a poor decision since the promise of employment was short lived, and the cost to the state, whether or not it chooses to honor its moral obligation, will be significant. The interest rate on the 38 Studios Bonds reflected that the bondholders recognized that there was a higher degree of risk with these bonds than Rhode Island's general obligation bonds. The bondholders have insurance. All of this is true but in many ways all of those points are beside the point in terms of the decision facing the General Assembly this year. Setting aside any ethical concerns with not honoring this obligation, the question today is an economic one. Which option is the less costly option for the state – appropriating the money for the 38 Studios Bonds or not? While we will admit that predicting the future in situations like this is not a perfect science, it is our view that ultimately the costs to the state will be significantly more if it chooses not to appropriate the funds for the 38 Studios Bonds. We have tried to be conservative in our assumptions so that the actual impact may be greater than we have identified, and there are many impacts where we could not quantify the negative effect.

By voting to approve the payment of these bonds, the General Assembly is not saying that it was a good decision to offer its moral obligation – that decision can be revisited the next time the state decides to provide its moral obligation to support a future debt issuance. By voting to approve the payment of these bonds, the message the market will take is that Rhode Island will stand by its moral obligations, and by extension, its legal obligations, thereby enabling the state to maintain its strong credit rating and access to low cost borrowing. A vote to approve payment would be, even if with regret, a rational response to the cost benefit analysis provided.

EXHIBIT A**Most Relevant Cases of Defaulting on Appropriation Debt****Town of Cicero, New York**

Cicero Local Development Corporation ("CLDC") issued its Series 2001A bonds to finance two ice rinks, a fitness building and certain infrastructure improvements. The Town of Cicero (the "Town") transferred 100 acres of land to CLDC for no cost, and entered into lease/sublease agreements in order to facilitate the transaction. The lease payments by the Town were subject to appropriation and the bond offering documents specifically noted that the lease payments were neither a legal, nor a moral, obligation of the Town. Pursuant to the sublease from the Town back to CLDC, CLDC would pay for costs of operation and maintenance and debt service on the Series 2001A bonds. Any amounts paid by CLDC would be credited against amounts owed by the Town under the lease.

The project revenues were insufficient and in 2003, the Town appropriated money to pay debt service. Nonetheless, in November 2003, the Town failed to make the payment. This led to the first default. The Town cured the first default but then failed to include the appropriation for the rental payments in the 2004 budget, leading to the second default. In its special comment entitled "Recent Local Government Defaults and Bankruptcies May Indicate a Shift in Willingness to Pay Debt" dated July 19, 2012, Moody's indicated that from 1970 to 2011, only one out of 71 cases of Moody's-rated defaults involved a local government that defaulted due to lack of willingness rather than ability to pay. The Town of Cicero was that local government. In September 2003, Moody's put the Town's general obligation bonds rated "A3" on watchlist for possible downgrade due to "uncertainty regarding the town's continued commitment to appropriate for their lease obligation." In November 2003 after the Town failed to make a deficiency payment to the trustee despite the inclusion of that amount in the 2003 budget and sufficient cash to make the payment, the Town's rating was downgraded to "Ba2".

The State Comptroller reviewed the transaction in 2005 and found that there was no legal authority for the transfer of land for no consideration, or for the lease. In October 2005, the land was sold by investors (who had foreclosed on the property) for \$2 million, reflecting just over a 10% recovery rate. Cicero issued general obligation bonds in 2006 with a rating of "Baa2" from Moody's and a rating of "BBB" from Fitch (who had not rated the Series 2001A Bonds), and then in 2010 those bonds were upgraded to "A2" by Moody's and "A-" by Fitch (this was not actually an upgrade but rather part of a broader recalibration of municipal bond ratings). Fitch's 2006 report stated: "The below-average 'BBB' rating, despite generally sound underlying credit characteristics, primarily reflect a decision by the town in 2004 to not appropriate for a lease payment which it had committed to under bonds sold by a conduit issuer." Fitch affirmed the "BBB" rating again in August 2009 citing the failure to appropriate and certain other credit factors. Later in 2011, Fitch dropped their rating due to insufficient information but again mentioned the Town's history of non-appropriation of lease payments.

Village of Lombard, Illinois

Lombard Public Facilities Corporation ("LPFC") issued various series of bonds in 2005 and 2006 for hotel, restaurant and banquet space outside of Chicago. LPFC was created by the Village of Lombard (the "Village") to undertake the project. The Village entered into a tax rebate agreement with LPFC pursuant to which the Village agreed that if certain trustee-held funds were depleted, that the Village would, subject to appropriation, deposit \$2 million for debt service reserve fund for the Series A Bonds from the

Village's hotel/motel tax fund or such other fund as determined by the Village until the Series A-2 Bonds achieved a debt service coverage ratio of at least 1.5x for three consecutive years. In addition, the Village agreed to semi-annually refund to LPFC certain pledged tax revenues to secure the Series B Bonds.

In December 2011, the Village voted not to cover shortfall on the Series A bonds leading to downgrade of the Village by S&P. The Village's issuer credit rating (the "ICR") went from "AA" to "BBB" and rating on debt certificates went from "AA-" to "BBB-". S&P stated "The lowered ICR and debt certificate rating reflects our opinion of the village's diminished willingness to pay debt service, despite the fact that the village has a history of making timely debt service payments on debt certificates. The debt certificates are paid from legally available funds and are not subject to annual appropriation."^{xi} In December 2013, the Village's voted to not appropriate funds to pay debt service on the Series 2005B Bonds pursuant to the tax rebate agreement. This led to default on the bonds on January 2, 2014.

In February 2014, S&P lowered the ICR of the Village from "BBB" to "B" and its debt certificates from "BBB-" to "B-" based on local general obligation criteria released September 12, 2013^{xii}. They stated: "The downgrade reflects a recent nonappropriation that triggered a payment default for revenue bonds issued by [LPFC]." "The 'B' rating reflects our view of very weak management, stemming from a lack of willingness to support appropriation debt. ... Our view of Lombard's financial management is otherwise strong, with good financial policies and practices in place. However, we are likely to continue to assess its overall management as very weak until, in our opinion, it no longer exhibits an unwillingness to support appropriation debt in a full and timely manner." "We do not expect to change the rating over the next two years [the period covered by the outlook] given that that act of nonappropriation in the case of the series 2005A bonds has been ongoing since December 2011 and the nonappropriation for series 2005B debt service occurred in December 2013. However if the village continues to retain its underlying credit characteristics, and if it adopts and adheres to comprehensive debt policies, the rating may improve over time."^{xiii}

City of Buena Vista, Virginia

The Public Recreational Facilities Authority of The City of Buena Vista, Virginia issued debt in 2005 for a municipal golf course. The City of Buena Vista entered into a lease where lease payments were subject to annual appropriation by the City Council. The debt was also secured by a mortgage on City Hall and related governmental offices and a pledge of certain revenues earned by the City related to the golf course.

In 2010 and early in 2011, the City failed to appropriate sufficient funds to make a debt service payment. The bond insurer, ACA, requested that the bond trustee use funds in the debt service reserve fund. In July 2011, City failed to deliver funds for debt service payment and trustee drew on insurance policy. The City entered into a forbearance agreement in 2011 and the City appropriated funds for debt service in accordance with that agreement. The City again defaulted in 2012, 2013 and 2014 and trustee drew on insurance policy. In June 2010, Moody's downgraded the City's issuer credit rating from "A1" to "Ba1" and then withdrew the rating for business reasons. Moody's report stated "The downgrade ... reflects the city's failure to include appropriation in its 2011 budget for annual debt service on its [golf course bonds]. Failure to appropriate demonstrates uncertainty about the city's willingness to meet its obligations and, given the magnitude of the obligation relative to security available to bondholders, is likely to result in losses."

City of Vadnais Heights, Minnesota

The Vadnais Heights Economic Development Authority (the “VHEDA”) issued bonds in 2010 and loaned the proceeds to CFP Vadnais Heights LLC for a sports complex. Pursuant to a master lease agreement, the City of Vadnais Heights was the sole tenant with a rental payment equal to the annual operating budget, including debt service.

Sports complex failed to generate sufficient revenues and the City had the option to cancel the lease annually and in 2012 the City did just that. VHEDA did a tender offer for two of the series of bonds. S&P stated that this was “[t]antamount to default” since it was done in a distressed situation. Moody’s downgraded the City from “Aa2” to “Ba1” and S&P downgraded the City from “A” to “B”. Moody’s report stated: “The city’s failure to appropriate represents a significant lack of willingness to pay on a lease obligation that supported debt issued in the capital markets.” “The stable outlook reflects our expectation that the city’s healthy General Fund financial operations ... and a moderately-sized tax base with above average wealth levels will not materially change over the medium term.”

As reported in a Bond Buyer article from September 12, 2012, a Moody’s analyst stated “While we recognize that the city’s right to terminate is clearly stated within the governing documents, the city’s appropriation pledge was critical.” S&P stated “The stable outlook reflects our view of the city’s recent unwillingness to support its appropriation debt, and accordingly, the city’s very weak management. We believe the city’s other factors are generally strong, including financial flexibility, budgetary performance, and liquidity. We do not expect to change the rating in the next two years [the period covered by the outlook] given that the act of non-appropriation occurred so recently and the lack of material changes or adoptions of policies or practices related to issuing debt. However, if the city continues to retain otherwise strong credit characteristics, and if comprehensive debt policies are adopted and adhered to, the rating may improve over the long term.”^{xiv}

City of Moberly, Missouri

The Industrial Development Authority of the City of Moberly, MO issued three series of bonds in 2010 to construct a sucralose manufacturing and processing facility. The facility was to be owned by the City of Moberly and operated by a private company (an affiliate of Mamtek International) hired pursuant to a management agreement with the City. The company had the option and, under certain circumstances, the requirement to purchase the facility. The City agreed, subject to appropriation, to make certain basic payments (in effect, debt service) and additional payments. Under the management agreement, the company assumed the obligation to manage and operate the facility, including to provide the City funds to repay the bonds.

The company failed to make its payment on August 1, 2011 and the City then failed to make its payment on August 15, 2011 leading to default. The City tried to bring in a substitute for the company, which failed. On November 1, 2011, the City gave notice to the trustee that the City Council would not make the appropriation to replenish the debt service reserve fund. Involuntary bankruptcy filing by company. Trustee accelerated debt on February 27, 2012.

In September 2011, S&P downgraded the City of Moberly’s issuer credit rating from “A” to “B” stating that it “reflects our diminished opinion of the city’s willingness to pay debt service.” In affirming Moberly’s “B” rating stable, S&P stated in 2012 that it “reflects our opinion of the city’s failure to

appropriate revenues for debt service on [Moberly IDA Series 2010 appropriation debt], beginning with payments in Sept. 2011... The city's failure to appropriate debt service payments triggered our opinion of a diminished willingness to meet financial obligations."^{xv} Despite the City's expressed intent to continue to appropriate funds for COPS, S&P left that rating one notch below the issuer credit rating "due to the appropriation risk and lack of a full-faith-and-credit unlimited ad valorem tax pledge." "Given our long-term view of the city's diminished willingness to meet its obligations, we do not anticipate raising the rating during the two-year outlook horizon."

Wenatchee, Washington

While this example does not involve a moral obligation, or an obligation that was subject to appropriation, we include it because of the rating agencies' focus on willingness to pay. The Greater Wenatchee Regional Events Center Public Facilities District issued bond anticipation notes in 2008. The City agreed to make timely loans to the district, if needed, to cure any shortfalls for interest payments until the bond anticipation notes were paid in full or defeased. The loans from the City were not permitted to be used to pay principal on the bond anticipation notes.

In September 2011, the City was attempting to assist the district in securing take out financing for the bond anticipation notes when a court found the city did not have capacity under state law to fully comply with its agreement to provide full credit support to the district's planned takeout obligations. As a result, the takeout obligations were not issued as planned. In November 2011, the City's unlimited tax general obligation was downgraded by Moody's from "Aa3" to "A3" and put on review for possible further downgrade. The downgrades and watchlist action were principally due to uncertainty over a potential December 2011 default on BANs.

In May 2012 Moody's downgraded the City's unlimited tax general obligation rating from "A3" to "Ba2" and placed the city's ratings under review for possible further downgrade. "The rating actions primarily reflect the city's lack of willingness to avert an expected ... default." "The ... ratings also incorporate diminished long-term financial flexibility from ongoing PFD operating subsidies and litigation costs." In June, the district defaulted on interest payments on the BANs while a plan to take out the BANs was under negotiation. The City had been asked to continue to support the payment of these interest payments, but declined although the terms of the contingent loan agreement appears to have required them to do so.

S&P similarly downgraded the City's general obligation debt from "A-" to "BBB" on December 2, 2011 after the bond anticipation notes were not paid in full on December 1, 2011 due to the city "not providing timely material support to the district in retiring the BANs (such as by issuing GO bonds within its legal authority) despite agreeing to execute a contingent loan agreement to make a full faith and credit pledge to provide loans to the district, if needed, to cover the principal and interest payments on the long-term obligations of the district that would retire the BANs." In the outlook, S&P said that "given that our criteria incorporates both the city's ability and willingness to fund obligations as they mature, we believe the city's decision to refrain from issuing GO bonds to the extent allowed under its debt capacity to contribute to the timely retirement of the district's BANs may constrain the rating during our two-year outlook horizon." This "BBB" rating was affirmed in January 2013 with a stable outlook. Although the district's BANs were by then retired in part due in part to the City's support, S&P pointed out that the City did not take enough steps to avoid the default.

Jones County, Texas

In 2009, in response to a request for proposals from the State of Texas, Jones County, Texas participated in two bond financings. The first was one where the bonds were to be issued by the Texas Midwest Public Facility Corporation to finance a secure corrections treatment center (the “Texas Midwest Project”). Jones County entered into a lease for the facility but the lease was only payable from project revenues. The corrections facility was expected to be used by the Texas Department of Criminal Justice, which had awarded the contract to the County. After the completion of the facility, the State of Texas notified the County that it would not start using the facility in September as planned.

The Jones County Public Facility Corporation issued bonds to finance a jail (the “Jail Project”). The Corporation leased the jail to Jones County with the County’s lease payments sufficient to pay debt service on the bonds. The County’s obligation to make payments was subject to annual appropriation. Under the terms of the lease, if the County failed to appropriate sufficient amounts in any fiscal year, the lease would terminate and the Corporation would take possession of the jail. Apparently the Texas Midwest Project was a companion project with the Jail Project, and until the Texas Midwest Project was used by the State of Texas, the Jail Project was unlikely to be used.

The County did not appropriate funds for debt service leading to non-payment of December 1, 2011 debt service. The County also announced that unless it was able to secure a tenant for the Jail Project that it did not intend to appropriate funds for debt service. In January 2012, S&P assigned its “BBB” long-term rating to the County’s 2012 combination tax and revenue certificates of obligation. The write up provided: “The rating reflects our view of the county’s lack of willingness to appropriate funds to make principal and debt payments on its appropriation debt, limited local economy.”^{xvi} The 2012 bonds were secured by an ad valorem tax levied against all taxable property in the County and secured by a subordinate lien pledge of revenues derived from the jail. The 2012 bonds were issued to refund the bonds issued to finance the Jail Project. Thus, the “BBB” rating, although a downgrade, was actually assigned at the time it was clear that the County was going to take care of the problem by refunding the bonds issued for the Jail Project. In June 2013, S&P affirmed the County’s long-term general obligation bond rating with a stable outlook citing the new tax rate to make debt service payments, “which demonstrates a commitment to paying off their obligations” as well as other credit factors.^{xvii}

Kerr County, Texas

The Hill Country Juvenile Facility Corporation issued bonds in 2002 to purchase juvenile detention facilities. The facilities were leased to Kerr County, Texas with the County’s lease payments sufficient to pay debt service on the bonds. The County’s obligation to make payments was subject to annual appropriation. The County had entered into an operating agreement with the Kerr County Juvenile Board to operate the detention facilities and to make the County’s lease payments subject to annual appropriation by the Juvenile Board as part of its budget process. The operating agreement did not relieve the County of its obligation to make lease payments except to the extent that the Juvenile Board actually made payments.

The County’s fiscal 2005 budget failed to appropriate funds for debt service on the bonds leading S&P to lower its rating on the County’s GO bonds from “A” to “BBB-” in September 2004.^{xviii} In March 2005, S&P withdrew its rating on the County’s GO debt outstanding after the execution of an agreement

pursuant to which bondholders received less than the principal amount of the bonds outstanding and agreed to the release of all financing documents and liens securing the bonds.^{xix}

This “BBB-” rating is higher than we would expect given the other cases and our discussions with S&P. We would be inclined to attribute this to the fact that this is an older case.

The following table summarizes the final rating changes due to unwillingness to pay:

City or Town	Moral Obligation or Other Obligation Subject to Appropriation	Willingness to Pay/ Ability to Pay	GO Rating Prior to Evidence of Unwillingness to Pay	Post Default GO Rating	Approp Rating Prior to Evidence of Unwillingness to Pay	Post Default Approp Rating
Cicero, NY	Yes	No / Yes	NR/NR/A3	NR/NR/Ba2		
Lombard, IL: Series 2005A-1	Yes	No/Yes	AA/NR/NR	B/NR/NR		
Buena Vista, VA	Yes	No/Yes	NR/NR/A1	NR/NR/Ba1		
Vadnais Heights, MN	Yes	No/Yes	A/NR/Aa2	B/NR/Ba1		
Moberly, MO	Yes	No/Yes	A/NR/NR	B/NR/NR	A-/NR/NR	B-/NR/NR
Wenatchee, WA	No	No/Yes	A-/NR/Aa3	BBB/NR/Ba2		
Jones County, TX	Yes	No/Yes		BBB/NR/NR		
Kerr County, TX	Yes	No/Yes	A/NR/NR	BBB-/NR/NR		

EXHIBIT B**Less Relevant Cases of Governmental Entities Not Honoring Commitments**

While less relevant for the reasons discussed below, we also thought that the following examples were worth mentioning.

City of Burlington, Vermont

The City of Burlington entered into a lease to fund the build out of a telecommunication system. Lease payments were suspended in February 2010 following a state Public Service Board ruling preventing the city from utilizing its pooled cash account to fund these payments. Moody's stated in its report from January 2011 downgrading the GO rating of the City of Burlington from "A2" to "A3": "Importantly, the circumstances of non-payment on the lease are due primarily to the ruling by the Vermont Public Service Board prohibiting the city from utilizing its pooled cash account to fund BT obligations rather than an unwillingness of the city to fund its lease obligations." Since the rating agencies did not view this as an example of an unwillingness to pay, we felt that the impact on the city's ratings was less indicative for purposes of our report.

Birmingham, Alabama

West Jefferson Amusement and Public Park Authority dba Visionland (an issuer created by 11 cities near and including Birmingham, AL) issued bonds in 1999 to finance and refinance Visionland theme park. Funding agreement signed by all 11 towns pursuant to which each had legal obligation to contribute amounts for debt service but could elect to end financial support in five years. Birmingham gave five year notice and denied that it had to make the payments for the next five years. In one of its offering documents, it said it believed that the Authority had violated the funding agreement. Visionland filed for bankruptcy and a majority of the bondholders approved the terms of the sale but continued to seek payment from Birmingham for the 5 year notice period.

One bondholder told The Bond Buyer that Birmingham's refusal to make its payments was tantamount to defaulting on a general obligation pledge and that it should impact the city's credit rating. Moody's rated Birmingham's general obligation "Aa3", S&P rated it "AA" and Fitch rated "AA-". According to one article, Fitch noted the city's dispute concerning the 5-year obligation in its credit report in December 2002. Ultimately, the City settled with the trustee and Birmingham agreed to make the remaining payments for that 5 year period. The rating agencies did not appear to downgrade Birmingham for its initial position that it would not make the payment for the five years but despite inquiries to rating agencies, we were not able to find a lot of information on this case.

City of Spokane, Washington

Spokane Downtown Foundation issued bonds in 1998 to acquire a parking facility and then leased the parking facility to the Spokane Parking Public Development Authority ("PDA"). The bonds were payable by PDA under lease. In addition, the PDA was obligated to pay fixed ground rent and operating expenses to a third party. Neither of these concepts included debt service on the Bonds. The City of Spokane pledged to make loans to the PDA from the City's parking meter revenues if and to the extent necessary to enable the PDA to pay fixed ground rent and operating expenses. The offering document

specifically stated that none of the City's assets or funds were pledged to the payment of principal of or interest on the bonds. The City also agreed to maintain parking meter rates at a level necessary, together with other legally available funds, to pay the ground rent and operating expenses.

Initially the City made a loan in early 2000 to cover ground rent and operating expenses but in April 2000, failed to make an additional loan that was required. The developer sued and there was ruling that said city must abide by the ordinance but City chose not to make the payment and appealed the ruling. In June 2000, S&P downgraded the City's unlimited tax general obligation from "AA" to "A+" and its limited tax general obligation from "AA-" to "A" due to the City's "continued and protracted unwillingness" to meet its financial obligations with respect to the garage. Note that while this obligation related to bonds, this was not an obligation to provide funds for debt service.

In August 2001, S&P downgraded both the unlimited and limited tax general obligations to "BBB" after there was a missed sinking fund payment on the bonds. S&P stated that the City's failure to meet its contractual obligations contributed to this default on the bonds. In October 2003, S&P again affirmed the "BBB" ratings giving this as one of its rationales: "The city's unresolved dispute about its covenants regarding a financial obligation in connection with a downtown parking garage facility – which raised concern about the city's willingness to honor its debt obligations."

In June 2004, the City issued bond anticipation notes to refund the outstanding bonds and in December 2004, S&P upgraded the City's general and limited tax general obligations to "AA-" noting that the bondholders were paid in full. In 2001, Moody's downgraded the City's unlimited tax and general obligation bonds from "A1" to "A2" and the City's limited tax general obligation bonds from "A2" to "A3." We do not have Moody's reports to be able to further elaborate on their logic, or any rating changes related to developments between 2001 and 2004.

Cases Where Governmental Entity Used Eminent Domain Powers to "Evade" Certificates of Participation Deals

In the late 1980s and early 1990s there were a number of deals involving certificates of participation where the governmental entity elected not to renew or chose to terminate a lease (which would cut off the stream of revenue to pay of the certificates of participation) but at the same time, used the governmental entity's power of eminent domain to take the formerly leased property for the governmental entity's own purposes. These deals caused quite a stir because the holders of the certificates of participation felt that this was an unfair device to evade the obligations to holders. While noteworthy, these cases are not as relevant to the 38 Studios discussion because they are fairly old and rating criteria and approach have changed significantly since then, but also because, while not within the spirit of the deals, the entities took measures that avoided the need to appropriate.

Sheridan, Colorado

Sheridan issued certificates of participation in 1988 to finance city building and elected to terminate the lease in 1996. Sheridan exercise right under eminent domain to purchase the building for itself. There were \$3.25 million of COPS outstanding and Sheridan proposed paying \$642,000 for the taking. The City said it needed to take the property because the large tenant who moved out had contributed a large amount of sales taxes and if it paid the full amount of the leases, the City would need to file for bankruptcy. After many rounds of litigation, the court told the City it had to move out or pay \$2.75

million for use of the building. The City ultimately moved out, and then when the trustee could not find another tenant, the City moved back in and paid roughly \$2 million but due to high legal fees, holders only got about 1/3 returned. This was an unrated deal.

Harmony Township Board of Education

Harmony Township Board of Education issued COPs in 1992 and terminated the lease in 1996. The COPs were not callable so the Township relied on eminent domain powers to purchase the property using general obligation bonds in 1996 to pay the price for the taking. COPs holders were paid full principal and interest. S&P maintained “BBB” rating but this was one of various deals cited at that time as not honoring the deals with COPs holders.

Klamath Falls, Oregon (An Older Certificate of Participation Deal)

Klamath Falls issued certificates of participation for theater equipment. The City decided not to appropriate payments for a lease-backed COPs and terminated its lease. The City cited financial stress. S&P lowered the general obligation rating of Klamath Falls, Oregon from “A-” to “BBB+” as a result of the City’s decision not to appropriate. This was reported to be the first time that S&P cited a default on a lease deal as the reason to downgrade general obligation debt even though S&P acknowledged that the city’s decision not to fulfill its lease was legal. In 1991, S&P noted that in many ways, a lease obligation is like a moral obligation. Lease debt holders are generally relying on a government pledge to seek the necessary appropriations.

Manchester, NH - No Legal Nor Moral Obligation

The Manchester Housing and Redevelopment Authority of the City of Manchester, NH issued bonds secured by the City’s meals and rooms taxes distributed by the state subject to appropriation. The only legal commitment of the City under the Financing Agreement was to make payments based solely on distributions from the state. In 2009, the state reduced these distributions. The City met the legal obligation and made payments from what it received from the state but this was not enough to cover debt service. While Fitch acknowledged that there was neither a legal nor a moral obligation, Fitch downgraded the City general obligation from “AAA” to “AA+” saying “although the city is not legally obligated to fund the shortfall, this decision is not consistent with an entity Fitch rates at the highest level.”

Illinois

Just for purposes of completeness, we do mention the default by the Southwestern Illinois Development Authority in 2003 on bonds issued in 1995 and secured by a moral obligation of the State of Illinois. The default occurred because the bond trustee failed to use the debt service reserve fund to make the debt service payment without a court order, following the borrower’s filing for bankruptcy. Illinois rating was not affected because the default was not caused by it.

Bankruptcies and Other Examples with Significant Evidence of Inability to Pay

We have not included various other examples which have been cited by rating agencies and others as examples of unwillingness to pay because in addition to evidence of unwillingness to pay, there were

also significant evidence of inability to pay. In a number of these cases, the governmental entity filed for bankruptcy to seek relief. We felt that these cases did not allow us to focus on what portion of the rating was due to unwillingness to pay, as opposed to ability to pay. A partial list includes: Stockton, CA, Hercules, CA, Jefferson County, AL, Harrisburg, PA, Detroit, MI, Scranton, PA and San Bernardino, CA.

ⁱ Moody's Investors Service "Ratings Update: Moody's downgrades to Baa1 from A2 Rhode Island 38 Studios bonds and places these bonds and all state general obligation and appropriation debt under review for downgrade" dated June 17, 2013.

ⁱⁱ Janice C. Griffith, " 'Moral Obligation' Bonds: Illusion or Security?", *The Urban Lawyer*, Vol. 8, No. 1 (Winter, 1976), pp. 54-93, <http://www.jstor.org/stable/27890676>

ⁱⁱⁱ April 3, 2014 email from Director, U.S. Public Finance, U.S. States Group.

^{iv} Moody's, Ratings Update, June 17, 2013.

^v Moody's Investors Service, "U.S. States Rating Methodology" dated April 17, 2013, Standard & Poor's Rating Services, "U.S. State Ratings Methodology" dated January 3, 2011, Standard & Poor's Rating Services, "Moral Obligation Bonds," June 27, 2006, Standard & Poor's Rating Services, "Appropriation-Backed Obligations."

^{vi} Each rating agency has somewhat different descriptions of what each bond rating means. For exact rating definitions, see Standard & Poor's Ratings Definitions dated March 21, 2014, Moody's Rating Symbols and Definitions dated April 2014 and FitchRatings Definitions of Ratings and Other Forms of Opinion dated January 2014.

^{vii} Moody's Investors Service U.S. States Rating Methodology dated April 17, 2013.

^{viii} We found the 1997 work entitled "Split Ratings and the Pricing of Credit Risk" by Richard Cantor, Frank Packer and by Kevin Cole particularly interesting. They found that in predicting yields based on ratings, it was better to use the average rating, particularly for below investment grade credits. For investment grade credits, the yields were best predicted by looking somewhere between the lower rating and the average rating. See *The Journal of Fixed Income*, December 1997, Vol. 7, No. 3: pp. 72-82.

^{ix} "The Scarlet Letter in The Municipal Bond Market: A Cost of Illinois' Poor Fiscal Reputation" by Martin Luby and Tima Moldogaziev dated March 10, 2014, The Illinois Budget Policy Toolbox (igpa.uillinois.edu/budget-toolbox)

^x See Moody's report entitled "Michigan's Local Governments Postpone Bond Deals as Investors Demand Higher Yields."

^{xi} Standard & Poor's, Global Credit Portal, "Lombard Village, IL ICR Lowered to 'BBB' After Board Rejects Request to Cover Debt Shortfall" dated January 5, 2012.

^{xii} Standard & Poor's, U.S. Local Governments General Obligation Ratings: Methodology and Assumptions published September 12, 2013. In Chart 1 it lists various negative overriding factors and includes "Lack of willingness to pay obligations (caps rating at "BBB-" for leases and "B" for debt)." Paragraph 33 states that: "When a management score of "5" results from a current lack of willingness to pay a debt, capital lease obligation, or a moral obligation pledge (see paragraph 53), the rating cap depends on the nature of the obligation. A current lack of willingness to pay an unconditional debt obligation of the government would cap the final rating on other GO debt of the government at no higher than "B" and would likely be lower.... Consistent with our criteria for appropriation-based obligations, a failure to pay a capital lease obligation also caps the GO rating (see "Appropriation-Based Obligations", published June 13, 2007). A current lack of willingness to pay a capital lease or other obligation subject to annual appropriation by the government, including a moral obligation pledge, would limit the GO rating to no higher than "BBB-" even though the government was not legally obligated to make payment on the appropriation obligation without the appropriation.

^{xiii} Standard & Poor's Ratings Services, "Summary: Lombard, Illinois; Appropriations; General Obligation" dated February 12, 2014.

^{xiv} Standard & Poor's Ratings Services, "Summary: Vadnais Heights Economic Development Authority, Minnesota Vadnais Heights; Appropriations; General Obligation" dated December 26, 2013.

^{xv} Standard & Poor's Rating Services, "Summary: Moberly Missouri; Appropriations; General Obligation" dated October 26, 2012.

^{xvi} Standard & Poor's Global Credit Portal, " 'BBB' Rating Assigned to Jones County, TX's Series 2012 Tax and Revenue Certificates of Obligation" dated January 12, 2012.

^{xvii} Standard & Poor's Rating Services, "Summary: Jones County, Texas; General Obligation" dated June 4, 2013.

^{xviii} Standard & Poor's Global Credit Portal, "Summary: Kerr Cnty, TX; Appropriation, Appropriation; Tax Secured, General Obligation" dated September 28, 2004.

^{xix} Standard & Poor's Global Credit Portal, "Summary: Kerr Cnty, TX; Appropriation, Appropriations; Tax Secured, General Obligation" dated March 15, 2005.